

**POLSKA AKADEMIA NAUK • KOMITET JĘZYKOZNAWSTWA**

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**PRACE JĘZYKOZNAWCZE**

**67**

**JERZY KURYŁOWICZ**

**STUDIES IN SEMITIC GRAMMAR  
AND METRICS**

**WROCŁAW • WARSZAWA • KRAKÓW • GDAŃSK  
ZAKŁAD NARODOWY IMIENIA OSSOLIŃSKICH  
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**LONDON — CURZON PRESS LTD**

**1973**



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Komitety Redakcyjne

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LONDON — CURZON PRESS LTD

1973

Curzon Press LTD · London  
SBN 7007 0025 0

*Printed in Poland*

Zakład Narodowy im. Ossolińskich — Wydawnictwo, Wrocław  
Oddział w Krakowie  
Drukarnia Uniwersytetu Jagiellońskiego, Kraków,  
ul. Czapskich 4

## PREFACE

When invited to prepare a second edition of my book *L'apophonie en sémitique* I decided to insert in it some topics which seemed worth treating from the structuralist point of view: the structure of the Semitic verbal root, the so-called verbal aspect, metrical questions. As a result the present monograph consists of a number of chapters devoted to sundry problems of Semitic linguistics. As regards apophony important changes have been made concerning the structuralist explanation of its rise and of the mechanism of differentiation.

The term *structuralism* is used here in the sense „classical structuralism“ proclaiming the intrinsic solidarity and interdependence of morphological structure and function and of their changes, a standpoint represented among others by the Prague School.

Though most of the tenets of phonemics have been already acknowledged and applied by Semiticists, the central i.e. morphological problems often continue to be treated in an obsolete way. Such fundamental concepts as system-conditioned (primary) and context-conditioned (secondary) functions and their hierarchy, the sharp distinction between motivated and non-motivated forms and the corollaries of this distinction, the relation between range and content, the notions of redundant features and of polarization (not to be confounded with C. Meinhof's „polarity“), and so on, still remain scarcely known or even unknown.

It seemed therefore useful to inquire into the applicability of these recent methodological implements in the field of Semitic. Future must show whether the points of view and the solutions proposed here will be acceptable to the experts.

Considering the aim of the book, an excessive cumulation of material has been avoided. The choice of Akkadian, Hebrew and Arabic as representants of the main dialectal groups seems sufficient to give an adequate idea of the structural skeleton of Semitic in its preliterate development. Other languages have been mentioned only occasionally.

Since the question of the Heb. vowel system still remains open the traditional transliteration of *GVG* I has been adopted in spite of its awkwardness as regards lenited stops. But *šva simplex* and *-h* (without *mappiq*) have been ignored, and the sign of length serves exclusively to render a *mater lectionis*.

## Chapter I. THE VERBAL ROOT IN SEMITIC

§ 1. The idea of the original biconsonantal character of some Sem. verbal roots goes back as far as the first appearance of Gesenius' Heb. grammar, i.e. to the beginning of the XIX<sup>th</sup> ct. (1817). A special monograph would be necessary to describe in detail the history of this theory and the arguments adduced in its favour. The most frequent, although least convincing one, was the fact that semantically related verbal roots frequently differ only by the third radical ( $R_3$ )<sup>1</sup>. Cf. Heb. *p-r-d* 'divide', *p-r-m* 'rend', *p-r-s* 'break', *p-r-š* 'burst, break', *p-r-q* 'tear off', *p-r-r* 'break, burst'. But the impossibility of determining the semantic value of  $R_3$  or at least its *morphological (suffixal) origin* permits to consider the possibility of other factors like contamination („Reimwortbildung“), phonetic symbolism („Lautsymbolik“) etc.

A structural comparison between such alleged enlargement of a biconsonantal root and the so-called I.E. root-determinatives („Wurzeldeterminative“) would be not only superficial but also fallacious. In the first place the I.E. determinatives have their counterparts in productive suffixes represented by identical consonantal elements, though in a varying degree, dental stops, *s* and „laryngeals“ being much more frequent than velar or labial stops. Secondly, the *attested* consonantal suffixes being in Sem. rare (*-t-*, *-n-*, *-in-* *-an-*), the chief source of „determinatives“ in Sem. are old *prefixes* whose function qua prefixes can be demonstrated.

§ 2. Looking for prefixal „determinatives“ has therefore proved a much more reliable method of reconstructing old biconsonantal verbs than having recourse to hypothetical suffixes<sup>2</sup>. Cf. *k-n* in Ar. *kāna* 'to be', Heb. (*nif'al*) 'be firm(ly established)', Akk. *kānu* (same meaning), and Ar. *sakana* = Heb. *šāchan* = Ugar. *škn* 'dwell', Akk. *šakānu* (caus.) 'lay down'. The „determinative“ *š* occurs as prefix in the derived verbal class *\*išaq-tilu*, cf. Akk. *ušapris*, Ar. *ia-s-ta-qtilu* etc.

<sup>1</sup> The first to draw attention to this fact was the Ar. philologist al-Baidāḡī (XIII<sup>th</sup> et.), cf. H. Fleischer, *Traité de philologie arabe*, 1964, 256.

<sup>2</sup> Although the *theoretical* possibility of *suffixal* enlargements cannot be contested, a cogent proof of their existence is scarcely possible. As regards the origin of some  $R_3 = i, u$ , cf. *infra* § 13.



§ 3. In order to prove the identity of the „determinative“ *š* with the historically attested prefix it would be hopeless to appeal to *semantic* considerations since the *š* of the verb *š-k-n* has long ago ceased to be felt as a *derivational* element. We must rely upon the general theory of the derived verbal classes. *Deverbative* verbs generally stem from deverbative nouns which are themselves derivatives of the basic verb. Thus:

1. basic verb → 2. deverbative noun → 3. denominative verb.

The prehistoric development 1. → 2. → 3. may be paralleled with historical specimens of quadriliteral verbs derived from deverbative nouns. E.g. Ar. *dahaba* ‘go, pass’ > *madhabu* ‘religious sect’ > *tamadhaba* ‘adhere to a sect’; *nattāqa* ‘gird’ > *mintāqu* ‘girdle’ > *tamantāqa* ‘put on a girdle’.

The direct association 1. → 3. changes the denominative verb into a deverbative one<sup>3</sup>. The derived verbs of the type (Ar.) *qattala*, *qātala*, ‘*aqṭala*, *inqatala*, *iqṭatala* and so on, owe their origin to deverbative nouns of the form *qatta<sup>xl</sup>*, *qāta<sup>xl</sup>*, ‘*aqṭa<sup>xl</sup>*, *inqata<sup>xl</sup>*, *iqṭata<sup>xl</sup>* < \**itqata<sup>xl</sup>*. The frequent disappearance of 2. has facilitated the direct association between 1. and 3.

If the prefixes of the derived verbal classes served originally to form deverbative nouns, it would be a vain attempt to look for a semantic identity between the *š* of the noun \**š-k-n* and the *š* of the verb *š-k-n*. In the former case we would have to do with a nominal category like adjective or agent noun, in the latter case with a verbal category like iterativity, durativity and so on. This difference of meaning is only a corollary of the change of opposition 1. → 2. becoming 1. → 3.

Whereas the semantic function of the *š* of *iaškunnu/šakana* cannot be determined, its *prefixal* origin seems highly probable. Not so in the case of the alleged *suffixal* origin *s* in Heb. *p-r-s* ‘break’: neither its value is known nor can its *morphological* character be rendered probable.

The derivation 2. → 3. produces in the first instance (*šakun* >) \**iaškunnu*, but according to chap. II (§ 35 and § 37) the productive rule implies apophony both in the root (*u* > *i*) and in the prefix (*a* > *u*), hence *iuškinu*. The form \**iaškunnu* is therefore *residual*. It continues certain secondary lexical or/and morphological functions of *iuškinu*. In the majority of cases we simply have to do with lexicalized forms<sup>4</sup>.

<sup>3</sup> The I.E. verbal classes (in *-ie/ġo-*, *-ske/sko-*, reduplicated, etc.) must be explained in much the same way, viz. via deverbative nouns derived from radical verbs (*L'apophonie en indo-européen*, p. 31).

<sup>4</sup> *Morphological* differentiation exists e.g. in the case of *iugattilu* : *iaqattulu* (*iaqattilu*, *iaqattalu*). The secondary function of the intensive form *iugattilu* was

§ 4. Similar examples may be cited for other verbal prefixes: Heb. *tā'āb* besides *īā'āb* 'to long for' („determinatives“ *t* and *ī*); *n-'u* and *ī-'u* 'be befitting for'; *n-f-l* 'fall': *š-f-l* 'sink down'; Ar. *sa-dala* = *ha-dala* 'let hang down (one's hair)': *sa-ru'a* = *ha-ri'a* 'hasten'; *na-biha* = 'a-baha 'remember'; *na-dima* = *sa-dima* 'feel remorse'; *na-ḥaza* = *u-a-ḥaza* 'sting, prick'; *na-ḡara* = *u-a-ḡira* 'be enraged, have a spite'.

The consonants *t*, *n*, *š* (Ar. *s*), *'*, *h* are prefixes which continue to be productive in historical verb-formation<sup>5</sup>. The apparent infix *t* in Ar. *iqṭatala*, Akk. *iptaras* etc. is in reality a prefix, cf. Ar. *t(a)qattala*, *t(a)qātala* (the Sem. metathesis of *t* + *sibilant* > *sibilant* + *t* has been generalized). The prefixal status of *m* is borne out by the types *maqṭal*, *miqṭal*, *maqṭūl* etc. (chap. VI, § 50 ff). To this list let us add *u-*, a notorious prefix represented by numerous verbs with  $R_1 = u$  like Ar. *uḷada* : *īalidu*, Heb. *īālād*, *īēlēḏ*<sup>6</sup>. Finally, the prefix *ī* which has left a few traces in nominal derivatives like Heb. *īšhar* 'oil' (*hašhīr* 'make shining'); Ar. 'asūb = *īa'sūb* 'queen-bee'; 'aqīd 'thickened' : *īa'qīd* 'thickened honey'.

A direct proof of a morphological enlargement of biconsonantal roots is their reduplication:  $R_1-R_2 >$  quadriconsonantal root  $R_1-R_2-R_1-R_2$ . E.g. Ar. *ma-ḥaḍa* 'shake' = *ḥaḍḥaḍa*; *na-hama* = *hamhama* 'bawl (elephant)'; *u-a-ḡala* = *ḡaḡala* 'penetrate'.

§ 5. A second series of procedures serving to enlarge biconsonantal into triconsonantal roots is of a totally different origin: lengthening of the root-vowel (*i* > *ī*; *u* > *ū*); gemination of  $R_2$ . This does not mean that all concave verbs or all verbs with  $R_2 = R_3$  originate in biconsonantal

iterative and durative. After the structural split *īuqattilu* : *īaqattulu* etc. the latter form functioned as a durative present, chiefly in Akk. (*īparras*, *īparris*, *īparrus*) where it ousted the inherited present form (chap. III § 8, § 15 ff).

<sup>5</sup> Many of apparently pertinent examples may be due to late dialectal developments. E.g.  $R_1 = u$  is assimilated in the Ar. VIII<sup>th</sup> class to the following *t*, *uṣala* 'bind' : *ittasala*. The latter form is ambiguous, *tt* being the result of either *u* + *t* or *t* + *t* (compare *ittaba'a* from *tabi'a* 'follow'). Hence the possibility of a double interpretation entailing the formation of a new present. Instances of  $u-R_2-R_3 \parallel t-R_2-R_3$  are rather numerous in Ar.: *taḥima* = *uḥima* 'suffer from indigestion'; *'atka'a* 'make somebody lean (upon)' : *uaka'a* 'lean (upon)'; *takila* = *uakala* 'trust'; *'allaḡa* = *'aulaḡa* 'make enter, put (into)'.

<sup>6</sup> Cf. the frequent alternation of  $u-R_1-R_2$  and  $R_1-u-R_2$  (or  $R_1-ī-R_2$ ) in Heb. E.g. *ī-g-r/g-u-r* 'be afraid'; *ī-t-b/t-u-b* 'be good'; *ī-m-r/m-u-r* 'change'; *ī-'-s/'-u-s* 'advise'; *ī-s-r/s-u-r* 'form'; *ī-s-t/s-u-t* 'set on fire'; *ī-h-l/h-ī-l* 'wait'; *ī-q-s/q-ī-s* 'awake'. Hence also, according to § 8, the alternation  $u-R_1-R_2$  :  $R_1-R_2-R_2$ , e.g. *ī-m-š/m-š-š* 'touch, grope'; *ī-r-q/r-q-q* 'spit'.

The distribution of stems as in *u-l-d* : *l-d* is the chief example for the well-known formula established by H. Bauer: certain prefixes gained a footing first in the „perf.“ and only afterwards penetrated into the „imperf.“ Another instance of this rule is the relation *'aqṭala* : *īuqṭilu* in the IV<sup>th</sup> class of Ar.

roots. Just as besides verbs like  $\check{s}-k-n$ , with an originally prefixal  $\check{s}$ , there were others whose  $\check{s}$  had always belonged to the root, even so there were verbs with inherited  $R_2 = i$  or  $u$  and verbs with inherited  $R_3 = R_2$ .

This second group of enlargements of biconsonantal roots, consisting in the lengthening of the root-vowel or of the consonant  $R_2$ , is the result of a *partial merger* of biconsonantal roots with triconsonantal roots of the structure  $R_1-i-R_3$ ,  $R_1-u-R_3$ ,  $R_1-R_2-R_2$ .

The inflectional forms of  $\check{i}a-R_1iR_2u$  (biconsonantal) and those of  $\check{i}a-R_1iR_3u$  (triconsonantal), of  $\check{i}a-R_1uR_2u$  (biconsonantal) and  $\check{i}a-R_1uR_3u$  (triconsonantal) became structurally identical before consonantal or zero endings owing to the *shortening of long vowels in closed syllables*. E.g. Ar.  $\check{i}a\check{s}iru$  'become', pl. fem. 3<sup>rd</sup> p.  $\check{i}a\check{s}irna$ , 2<sup>nd</sup> p.  $ta\check{s}irna$ , jussive  $\check{i}a\check{s}ir$ ,  $ta\check{s}ir$ , 'a $\check{s}ir$ ,  $na\check{s}ir$ , imperat.  $\check{s}ir$ ;  $\check{i}aqumu$  'stand up', pl. fem. 3<sup>rd</sup> p.  $\check{i}aqumna$ , 2<sup>nd</sup> p.  $taqumna$ , jussive  $\check{i}aqum$ ,  $taqum$ , 'aqum,  $naqum$ , imperat.  $qum$ . Heb. indic.  $\check{i}aqum$  ( $< \check{i}aqumu$ ), jussive  $\check{i}aqom$  ( $< \check{i}aqum$ ). This means that before consonantal and zero endings triconsonantal „concave“ roots became biconsonantal. In these positions the short vowel of biconsonantal verbs could be interpreted as a *shortened long vowel*, thus entailing a corresponding long vowel in open syllables. The function of such secondary long  $i$ ,  $u$  was to render the forms more „expressive“<sup>7</sup>.

§ 6. The triconsonantal verbs with  $R_2 = R_3$  underwent in forms with *vocalic* endings a metathesis:  $\check{i}aR_1R_2iR_2u > \check{i}aR_1iR_2R_2u$  etc. Before consonantal or zero endings the treatment was regular:  $\check{i}aR_1R_2iR_2-na$ ,  $\check{i}aR_1R_2-iR_2$ . The above change brought about a relation between  $\check{i}aR_1R_2iR_2$  and  $\check{i}aR_1iR_2R_2u$  parallel to that between  $\check{i}aR_1iR_2$  and  $\check{i}aR_1iR_2u$ , and a competition between  $\check{i}aR_1iR_2R_2u$  and  $\check{i}aR_1iR_2u$  which has to be explained as follows. Compared with  $\check{i}aR_1R_2iR_2$  the form  $\check{i}aR_1iR_2R_2u$  offers the suppression of the second consonant of the initial cluster ( $R_1R_2$ ) implying the gemination of the final root-consonant, i.e.  $\check{i}aR_1R_2iR_2 > \check{i}aR_1iR_2 > \check{i}aR_1iR_2R_2u$ . Hence the possibility of deriving from  $\check{i}aR_1iR_2$  the form  $\check{i}aR_1iR_2R_2u$  besides the already existing  $\check{i}aR_1iRu$ . The adoption of  $\check{i}aR_1iR_2R_2u$  entailed, of course, the corresponding transformation of  $\check{i}aR_1iR_2$  to  $\check{i}aR_1R_2iR_2$ .

§ 7. The mechanism of the enlargement  $R_1-R_2 > R_1-R_2-R_2$  is therefore

<sup>7</sup> In the *linguistic* sense of this term. Of two forms  $F_1$  and  $F_2$  having the same semantic function,  $F_2$  is more „expressive“ than  $F_1$  if  $F_2 = F_1 +$  an additional characteristic (in the present case the lengthening of the root-vowel).

Although lacking the necessary precision R. Růžicka's formula in OLZ 38 (1938), p. 599 would meet the point („tendency to enlarge biconsonantal into more impressive triconsonantal roots“). The basic phenomenon, however, is the phonemic merger of long and short vowels in closed syllables. Moreover, Růžicka's explanation does not apply to roots with  $R_1 =$  original prefix, i.e. to all types of root-enlargement.

fundamentally the same as that of the *lengthening of root-vowel* of biconsonantal roots. In the last instance it ought to be explained by a phonemic merger, partial or total, of triconsonantal and biconsonantal structures. This is something essentially different from the enlargements of the first group, which must be accounted for *morphologically*. In the former case the spread of the lengthening (of consonant or vowel) is motivated by „expressivity“ (in the linguistic sense, cf. footnote 7). In the latter case the forms with old prefixes (=  $R_1$ ) are residual (with regard to the historical derived classes, not to the biconsonantal basic verb).

Trying to reduce these different phenomena to a common denominator would necessarily lead to a confusion.

§ 8. *GVG* I, p. 632 Brockelmann opposed certain attempts of tracing back  $R_1-R_2-R_2$  to  $R_1-R_2$ <sup>8</sup> on the grounds that such an enlargement would not be consistent with  $R_1-R_2 > R_1-i-R_2$  or  $R_1-u-R_2$ . Why should lengthening of  $R_2$  and lengthening of the root-vowel have been used indiscriminately? In actuality there must have been a chronological difference between the underlying phonemic facts, viz. the shortening of long vowels in closed syllables and the metathesis  $-R_1R_2iR_2- > -R_1iR_2R_2-$  before vowels. The former is an earlier, the latter a more recent change. The form  $iR_1iR_2$  in the inflection of „concave verbs“<sup>9</sup> was a weak point exposed to a renewed pressure of triconsonantal verbs ( $R_1-R_2-R_2$ ).

Thus the coexistence of  $iR_1iR_2u$  and  $iR_1iR_2R_2u$  points as a rule to an original biconsonantal verb  $*iR_1iR_2u$ . The two enlargements are frequently attested side by side within the same Sem. language. Cf. the semantic identity or close affinity of the following pairs of verbs:

Type $R_1-R_2-R_2$	Type $R_1-i-R_2$ ( $R_1-u-R_2$ )
Arabic	
<i>dakka(u)</i> ‘grind’	<i>dāka(ū)</i> ‘grind’
<i>dalla(i)</i> ‘be poor, disdained’	<i>dāla(i)</i> ‘be low, disdained’
<i>darra(u)</i> ‘injure, do harm’	<i>dāra(ū)</i> ‘injure, do harm’
<i>nahha(u)</i> ‘make the camel kneel down’	<i>nāha(ū)</i> ‘kneel down (camel)’
Hebrew	
<i>h-m-m</i> ‘confuse, disturb’	<i>h-u-m</i> ‘stir, discomfit’
<i>z-r-r</i> ‘squeeze out’	<i>z-u-r</i> ‘press, wring’
<i>t-h-h</i> ‘be besmeared’	<i>t-u-h</i> ‘plaster’
<i>m-k-k</i> ‘sink’	<i>m-u-k</i> ‘be down, grow poor’

<sup>8</sup> He would have been right in opposing the view that *all* triconsonantal verbs  $R_1-R_2-R_2$  go back to  $R_1-R_2$ .

<sup>9</sup> Before zero or consonantal ending.

<i>m-l-l</i> 'circumcise'	<i>m-ʔ-l</i> 'circumcise'
<i>m-š-š</i> 'feel, grope'	<i>m-ʔ-š</i> 'feel, touch'
' <i>r-r</i> 'strip (oneself)'	' <i>ʔ-r</i> ( <i>nif'al</i> ) 'be naked'
<i>p-r-r</i> 'destroy'	<i>p-ʔ-r</i> 'destroy'
<i>š-r-r</i> 'wrap'	<i>š-ʔ-r</i> 'bind, tie'
<i>š-r-r</i> 'show hostility (to)'	<i>š-ʔ-r</i> 'show hostility (to)'
<i>r-m-m</i> 'rise'	<i>r-ʔ-m</i> 'rise'
<i>š-k-k</i> 'cover in order to screen'	<i>š-u-k</i> 'hedge (with thorns), fence'

The members of each pair have certain points of neutralization: *pō'el*, *pō'al*, (*hiḥpō'al*), testifying to their relationship.

Another proof of the affinity of the verbal roots with  $R_2 = R_3$  and those with  $R_2 = i, ʔ$  is the occasional formation  $R_1aR_2R_1aR_2$  (Heb. *pil-pel* etc.) representing the reduplication of the original biliteral root. Thus *g-l-l* 'roll' > *galgal* like *k-ʔ-l* 'measure, hold' > *kalkal*; *h-ʔ-l* 'quiver with fear' > *ḥalḥal* like *š-q-q* 'rush upon' etc. > *šaḡṣaḡ*.

§ 9. A third group of enlargements is represented by  $R_3 = i, ʔ$ . Here we have real suffixes attested in the formation of nouns<sup>10</sup>: *-aiʔ* and *-aʔʔ* > Ar. *-ā*; *-iiʔ* und *-iʔʔ* > Ar. *-iʔ*. E.g. *bašara* 'bring good news': *bušrā* 'good news'; *qatiluʔ* 'killed': pl. *qatlā*; *adrāʔ* 'virgin': pl. *adārīʔ*; *ḥidriʔatuʔ* 'rugged hill': pl. *ḥadārīʔ*<sup>11</sup>.

Nouns formed from biconsonantal verbs by means of the suffixes *-i-*, *-ʔ-* served as base of denominative verbs:

$R_1-R_2$  (biconsonantal verb)  $\rightarrow R_1-R_2-i(ʔ)$  (noun)  $\rightarrow R_1-R_2-i(ʔ)$  (triconsonantal verb).

A great number of verbs with  $R_3 = i, ʔ$  are closely related to verbs containing other enlargements (prefixal or quantitative of the first two groups).

Akk. *balū* 'disappear, vanish', Heb. *bālā* 'be worn out', Ar. *balā(u)* 'be worn out': Heb. *nāḇel* 'fade, decay';

Akk. *buzzū* 'disgrace', Heb. *bāzā* 'despise': Heb. *b-ʔ-z* 'despise';

Heb. *d-k-i* (*pi'el*) 'crush': Ar. *dakka(u)* 'crush';

Akk. *zarū* 'scatter, sow', Heb. *z-r-i* 'scatter, winnow', Ar. *darā(u)* 'winnow': Ar. *maddara* 'scatter, separate';

Akk. *galū* 'go into exile'<sup>12</sup>, Heb. *gālā* 'go into exile', Ar. *jalā(u)* 'emigrate': Ar. *ǧalla(i)* 'emigrate';

Akk. *gerū*, *garū* 'attack', Heb. *g-r-i* 'engage in strife': Heb. *g-ʔ-r* 'attack, assail';

<sup>10</sup> Nasals and *-t* may have also served as enlargements of biconsonantal roots, cf. their role as suffixes in the historical languages (GVG I, p. 395 f.).

<sup>11</sup> Old suffixal *-ʔ-* besides suffixal *-i-* is also borne out by the Sem. parallelism *-i(i)ʔtu*: *-ītu*, *-uʔ(u)ʔtu*: *-ūtu*.

<sup>12</sup> From Aram.

Heb. *g-z-i* 'cut off' : Heb. *g-z-z* 'shear', Ar. *ḡazza(u)* 'shear';

Ar. *ḡamiḡa* 'glow, be heated' : Akk. *emmu* 'hot', Heb. *ḡ-m-m* 'be or grow warm', Ar. *ḡamma(a)* 'be very hot';

Ar. *ḡanā(u)* 'feel liking (for)' : Akk. *enēnu* 'feel liking (for)', Heb. *ḡanan* 'favour', Ar. *ḡanna(i)* 'have compassion (with)';

Heb. *ḡārā* 'be or become hot, burning', Ar. *ḡarḡatu* 'heat' : Akk. *erēru* 'burn, glow', Heb. *ḡ-r-r* 'be aglow', Ar. *ḡarra(a)* 'be hot';

Akk. *kalū* 'cease, finish', Heb. *kālā* 'cease, perish' : Akk. *kalālu* 'be finished', Heb. *kālāl* 'to perfect';

Heb. *k-r-y* 'purchase, barter', Ar. *karā(i)* 'let on hire' : Akk. *makāru* 'trade', Heb. *māchar* 'sell';

Ar. *madā(i)* 'stretch' : Akk. *madādu* 'measure', Heb. *māḏād* 'measure', Ar. *madda(u)* 'stretch';

Heb. *māšā* 'drain out', Ar. *mašā(u)* II 'drain to the last drop' : Heb. *m-s-š* 'sip', Ar. *mašša(a, u)* 'suck';

Heb. *q-l-i/y* 'be slight, of little account' : Heb. *q-l-l*, Ar. *qalla(u)* 'be small (in number)';

Akk. *rabū* 'grow', Heb. *rāḇā* 'become numerous', Ar. *rabā(u)* 'increase' : Heb. *r-b-b* 'become numerous', Ar. *rabba(u)* 'increase' (trans.);

Akk. *radū* 'chase' : Akk. *radādu* 'persecute';

Akk. *zakū* 'be or become clean', Heb. *zāchā* 'be clean', Ar. *zakā(u)* 'be clean' : Heb. *z-ch-ch* 'be pure, clean'.

§ 10. Thus the general problem of the Sem. root-enlargements must be differentiated. The enlargements belong to three different groups:

- 1) petrified prefixes;
- 2) internal lengthenings (of vowel or consonant);
- 3) old suffixes.

The pertinent cases may be explained *structurally*, the semantic side still remaining a question for future research. On the contrary, enlargements of the type *p-r* : *p-r-š*, which have interested many scholars, cannot be explained *structurally*, no suffix *-š* being attested in Sem. A purely semantic proportion like

$$p-r : p-r + š = R_1-R_2 : R_1-R_2 + š$$

( $R_1-R_2$  being the symbol of another biconsonantal root with *š*-enlargement) cannot be established, since the original function of *š* defies reconstruction.

§ 11. As regards the procedures under 2) there is an essential difference between lengthening of vowel and gemination of consonant. Whereas the phonemic opposition *short vowel* : *long vowel* is solidly anchored on an alternation (cf. chap. II, § 20), no such phonemic alternation<sup>13</sup> exists

<sup>13</sup> As e.g.  $-R_2R_2$  before vowel :  $-R_2$  before consonant, parallel to  $-iR_2$  before vowel :  $-iR_2$  before consonant.

between simple and double consonants within inflectional paradigms.

Both lengthening of the vowel of  $R_2$  of triconsonantal roots and gemination of  $R_2$  or  $R_3$  are applied in the formation of *deverbative nouns*. The former, based on the alternation mentioned above, is of nominal<sup>14</sup>, the latter of verbal origin.

To explain the gemination occurring in *triconsonantal* verbs<sup>15</sup> and their nominal derivatives we must have recourse to *biconsonantal* roots. Only in this way are we able to account for the strange phenomenon that it is now  $R_2$ , now  $R_3$  which undergoes gemination. It would be against sound method to admit its arbitrary character. Above we have established the coexistence of  $R_1\text{-}R_2 + i$  and  $R_1\text{-}R_2R_2$  on the one hand, that of  $R_1\text{-}i\text{-}R_2$  and again  $R_1\text{-}R_2R_2$ , on the other hand. It is the relation

$$\begin{array}{l} \downarrow i\alpha R_1 i R_2 u \\ \downarrow i\alpha R_1 i R_2 R_2 u \quad (\text{shortening of } i \text{ to } \check{i} \text{ in a closed syllable}) \end{array}$$

which explains the gemination of  $R_3$  in triconsonantal roots. Notice that in  $i\alpha R_1 i R_2 u$  (standing for  $*i\alpha R_1 i R_2 u$ ) the second consonant has the status of  $R_3$ , not of  $R_2$ , of a *triconsonantal root*.

§ 12. Gemination of  $R_3$  occurring in triconsonantal roots may be exemplified by the classes IX and XI of Ar. (colours and physical defects): *igtalla*, *igtallu*; *igtālla*, *igtāllu*. The type *qatlaʔl* is represented by the curious Ar. infinitives *bainūnatu* < *iabīnu* 'be distinct (from)'; *daimūmatu* < *iadūmu* „last“; *šaiḥūḥatu* < *iāšīḥu* 'grow old' (type *qatlūl*, GVG I, p. 366).

As regards the doubling of  $R_2$  cf. the scheme

$$\begin{array}{l} \downarrow i\alpha R_1 R_2 \check{i} \quad 3^{\text{rd}} \text{ p. pl. } i\alpha R_1 R_2 \text{-}\check{u}na \\ \downarrow i\alpha R_1 \alpha^x R_2 R_2 u \quad 3^{\text{rd}} \text{ p. pl. } i\alpha R_1 \alpha^x R_2 R_2 \text{-}\check{u}na \end{array}$$

In this case the second consonant, forming a cluster with the initial, has the status of  $R_2$ .

Therefore depending on whether the base is a „concave“ or a „defective“ verb the above oppositions explain the origin of  $R_3R_3$  or  $R_2R_2$ . They are the result of a coexistence, of a semantic alternation or a secondary derivational relation between two different enlargements of the biconsonantal verbal root.

§ 13. Besides biconsonantal roots enlarged by the nominal suffixes *i*, *u* there must have existed *original* triconsonantal roots with inherited

<sup>14</sup> N. B. in *triconsonantal* roots.

<sup>15</sup> For  $R_2R_2$  cf. verbal class II, for  $R_3R_3$  verbal class IX of Ar.: *qattala*, *igtalla*.

$R_3 = i, u$  <sup>16</sup>. They were the source of a whole series of *nominal suffixes* containing the semivowels  $i, u$  — as suggested already by Barth (*Nominalbildung*, p. 379 ff., 391 ff.) <sup>17</sup>. We must therefore count with the relative chronology 1) existence of original triconsonantal roots with  $R_3 = i, u$ ; 2) rise of certain suffixes containing  $i, u$  which were added to *triconsonantal roots*; 3) use of these suffixes to enlarge *biconsonantal verbs*.

Barth neglected, however, to show the mechanism of how  $i, u$ , originally belonging to the consonantal skeleton of the verbal root, happened to be perceived as detachable suffixes, which could afterwards be applied to triconsonantal roots.

The deverbative nouns Ar.  $R_1a^xR_2aR_3$ ,  $R_1a^xR_2\bar{a}R_3$  took the form  $R_1a^xR_2\bar{a}$ ,  $R_1a^xR_2\bar{a}'$  when derived from defective roots:

„sound“ roots	„defective“ roots
<i>qatal</i>	$R_1aR_2\bar{a}$
<i>qatāl</i>	$R_1aR_2\bar{a}'$
<i>qital</i>	$R_1iR_2\bar{a}$
<i>qitāl</i>	$R_1iR_2\bar{a}'$
<i>qutal</i>	$R_1uR_2\bar{a}$
<i>qutāl</i>	$R_1uR_2\bar{a}'$

Confronted with forms like Ar. 3<sup>rd</sup> p. sing. fem. *ramat*, *da'at*, 2<sup>nd</sup> p. sing. fem. *tarmīna*, *tad'īna*, 3<sup>rd</sup> p. pl. masc. *īarmūna*, *īad'ūna*, 2<sup>nd</sup> p. pl. masc. *tarmūna*, *tad'ūna*, where the verbal root was reduced to *two consonants*, the types  $R_1a^xR_2\bar{a}$  and  $R_1a^xR_2\bar{a}'$  appeared as being formed with the *suffixes*  $-\bar{a}$ ,  $-\bar{a}'$ . Hence the possibility of using them with triconsonantal roots.

These are the suffixes used in the formation of the Ar. elative (fem. *kubrā*, also *'uḥrā*), of the fem. type *sakrā*, of the fem. of adjectives denoting colours and physical defects, but in the first instance of abstracts and collectives in  $-\bar{a}$  <sup>18</sup>,  $-\bar{a}'$ ; cf. the 'broken' plurals *qutīlā*, *'aqṭilā*, *qallā*, *qatālā* <sup>19</sup>.

When attached to the deverbative forms *qatl*, *qitl*, *qutl* or to forms with

<sup>16</sup> Just as besides the roots  $R_1-R_2$  enlarged by gemination to  $R_1-R_2-R_2$  one must assume the existence of *original* triconsonantal roots of the structure  $R_1-R_2-R_3$ .

<sup>17</sup> Triconsonantal roots with  $R_3 = i, u$  („defective roots“) have in general played an important part in the evolution of Sem., cf. the origin of the ablaut  $u > i$  in the derived verbal classes, chap. II, § 35.

<sup>18</sup> Eth.  $-\bar{e}$ ,  $-\bar{o}$ , corresponding to Ar.  $-\bar{a}$  is due to the restoration of intervocalic  $-i-$ ,  $-u-$  in defective verbs.

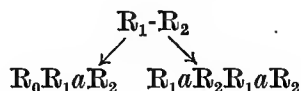
<sup>19</sup> Long vowels of certain other suffixes like Akk.  $-\bar{u}t$ , Heb.  $-\bar{i}p$ ,  $-\bar{u}p$ , Eth.  $-\bar{i}t$ ,  $-\bar{u}t$ , are conditioned by the presence of the old fem. ending  $-t$  competing with the productive ending  $-at$ . Cf.  $-\bar{i}iatu : -\bar{i}itu (> -\bar{i}tu)$ ,  $-\bar{u}yatn : -\bar{u}ytu (> -\bar{u}tu)$ ; similarly  $-\bar{a}iatu : -\bar{a}itu$  (Eth.  $-\bar{e}t$ ),  $-\bar{a}yatn > -\bar{a}utu$  (Eth.  $-\bar{o}t$ ).



lengthening (*qatāl* etc.) — all of them originally abstracts — the suffixes  $-\bar{a}$ ,  $-\bar{a}'$ , competing with  $-at$ , functioned as simple *reinforcements*.

§ 14. The quadriliteral forms of the Ar. verbal classes XII—XV repose originally upon *biliteral* roots enlarged by prefix *and* internal or final elements, i.e. by reduplication of the root, gemination of  $R_2$ , introduction of internal  $\mu$ ,  $i$  or addition of  $\mu$ ,  $i$ .

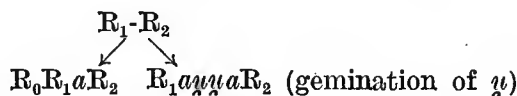
Class XII stems from  $R_1$ - $R_2$  enlarged by prefix  $R_0$  and reduplication of  $R_1$ - $R_2$ :



$$R_1-R_2 : R_1aR_2R_1aR_2 = R_0R_1aR_2 : x \quad (x = R_0R_1aR_2R_1aR_2)$$

The model  $R_0R_1aR_2 : R_0R_1aR_2$  permits the proportional derivation *qtal* : *qtaltal*, cf. Heb. *p' al'al*, where *q* is not a prefix. The Ar. form must have originated in verbs with  $R_3 = \mu$  ( $iR_1R_2auR_2a\mu a$ ), hence in „sound“ verbs *iqtautala* (cf. § 34).

Class XIII stems from  $R_1$ - $R_2$  enlarged by prefix  $R_0$  and the introduction of internal  $\mu$ :



$$R_1-R_2 : R_1a\mu\mu aR_2 = R_0R_1aR_2 : x \quad (x = R_0R_1a\mu\mu aR_2)$$

Hence *qtal* : *qtan\mu al* (*iqtan\mu ala*), where *q* is not a prefix.

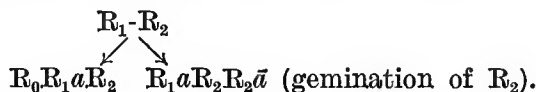
Class XIV stems from  $R_1$ - $R_2$  enlarged by prefix  $R_0$  and the gemination of  $R_2$ :



$$R_1-R_2 : R_1aR_2R_2aR_2 = R_0R_1aR_2 : x \quad (x = R_0R_1aR_2R_2aR_2).$$

Hence *qtal* : *qtallal* > (with so-called „dissimilation“) *qtanlal* (*iqtanlala*), cf. *infra* § 32.

Class XV stems from  $R_1$ - $R_2$  enlarged by prefix  $R_0$  and a final  $i$ :



$$R_1-R_2 : R_1aR_2R_2\bar{a} = R_0R_1aR_2 : R_0R_1aR_2R_2\bar{a}$$

Hence *qtal* : *qtallā*, with ‘dissimilation’ *qtanlā* (*iqtanlā*).

§ 15. The phonemic structure of the triliteral verbal root is subject to considerable restrictions regarding the immediate neighbourhood of  $R_1$  and  $R_2$  (in  $R_1R_2a^*R_3$ ) or  $R_2$  and  $R_3$  (in  $R_1a^*R_2R_3$ ). Thus e.g. in a triliteral

root  $R_2$  is scarcely ever identical with  $R_1$  since  $R_1R_2a^xR_3$  would engender an initial geminate excluded in Semitic. Although on the other hand  $R_2 = R_3$  are frequent,  $R_2R_2$  is not admitted in word-final position, cf. Ar. *īafirru* but *īafirir*.

If therefore a superficial observation shows the absence of Ar. roots with  $R_1 = t$  plus  $R_2 = d$  or vice versa, the lack of  $R_2 = t, d, \dot{t}, \dot{d}, \ddot{t}, \ddot{d}, s, z, \dot{s}, \dot{z}$  after an initial  $d$  or  $\dot{z}$ , the incompatibility of  $R_1 = h, \dot{h}, \ddot{h}$  with  $R_2 =$  one of these elements, etc., the natural inference will be that in such cases the *direct* contact of certain phonemically related  $R_1$  and  $R_2$  (in  $R_1R_2a^xR_3$ ) must have resulted in total assimilation, hence in geminates which would have been automatically simplified in word-initial position. On the other hand such an assimilation of  $R_2$  and  $R_3$  could produce a geminate preserved before a following suffixal or desinential vowel<sup>20</sup>.

There have been of course also partial assimilations (or dissimilations) of contiguous consonants, deducible from instances like the incompatibility of  $t + k$  (and  $k + t$ ) in Ar. versus the incompatibility of  $q + t$  in Heb.

§ 16. The etymological (or rather morphological) writing of Sem. is apt to mask facts of partial or total assimilations in contact, but this difficulty has been in a large measure overcome 1) by the study of modern dialects; 2) by sporadic written traces, direct or indirect, certain remarks of Ar. grammarians etc., which confirm the modern data. Regarding the former see Brockelmann I p. 152—179 *passim*. For the latter cf. some examples attested by writing: Ar. *'atūdu* „kid“ : pl. *'iddānu*; *miṣdagatu* = *mizdagatu* 'pillow' ( $\dot{s} + d > zd$ ); *ījtazza* and *ījdazza* (<  $\dot{j}azza$  'shear';  $t + g > dg$ ). Ar. grammarians permitted the writing *tt* for  $\dot{d}, \dot{t}, d$  plus  $t$  of the „perf.“ endings. Akk. *zakāru* 'talk, tell' and *saqāru, ṣaqāru* (*izkuru > isquru*, i.e.  $z + k > sq$ ).

An *indirect* proof of assimilation are synonyms like Ar. *saqiba = ṣaqiba* 'be near' (*īasqabu > īaṣqabu* with  $s + q > ṣq$ ) or *maṣira = naṣira* 'to thirst' (*īamgaru > īangaru*,  $m + g > ng$ ). Similarly Heb. *pāzar* and *bāzar* (Ar. *ba-dara*) with  $p + z > bz$ ; *ṣā'aq* and *zā'aq* 'scream' ( $\dot{s} + ' > z'$ ). Cf. also § 21 and (for external sandhi) § 26.

§ 17. Indirectly such assimilations are furthermore suggested by differences between languages as in:

Ar. *qatala* 'kill' : Heb. *qāṭal* ( $q + t > q\dot{t}$ )

Ar. *qatara* 'spread a smell or vapour' : Heb. *qtorēp* 'smoke of the sacrifice'

Ar. *ṣaḥada* 'deny' : Heb. *kiḥēḏ* ( $g + \dot{h} > k\dot{h}$ )

Heb. *sāḥal* 'bear' : Akk. *zabālu* ( $s + b > zb$ ).

<sup>20</sup> This phonemic origin of certain geminates must be of course distinguished from the *morphological use* of gemination discussed above in §§ 6—7.

The chief bulk of instances refers to partial or total assimilations in contact between voiced and voiceless, emphatic and non-emphatic.

§ 18. We assume that the incompatibility of two closely related *contiguous* phonemes  $R_1$  and  $R_2$  is to be explained by their total assimilation resulting in  $R_1R_2(\bar{R})$  inadmissible in initial position though offering no difficulties in root-final position ( $R_2 = R_3$ ) i.e. before desinences and suffixes. Incompatibility is only a consequence of another structural requirement, viz. the exclusion of verbal roots with  $R_1 = R_2$ . But  $R_2 = R_3$  being admissible the root-final geminate may be — and probably often is — the result of assimilation. If for  $R_2R_3$  the phonetic combinations agree with those for  $R_1R_2$ , it is only because the roots in  $-R_2R_2$  are necessarily left out of consideration when establishing statistics about the incompatibilities of  $R_3$  with  $R_2$ .

Greenberg's fundamental study in Word 6 (1950), restricted to triliteral verbal roots, formulates the incompatibilities occurring between two neighbouring (not necessarily contiguous) radicals i.e. between  $R_1$  and  $R_2$  and between  $R_2$  and  $R_3$  of  $R_1(a)R_2(a)R_3$ . In our opinion it is the *immediate* contiguity  $R_1 : R_2$  ( $R_2 : R_3$ ), without intermediate vowel, which has been originally decisive. Now  $R_1R_2$  occurs in verbal inflection, cf. the stem of the „imperfective“, in its pure form  $R_1R_2$ - (imperative).

§ 19. In order to establish the laws of incompatibility of root-initial consonants ( $R_1$ ) with root-internal consonants ( $R_2$ ) a list of all triliteral verbal roots (over 4300) occurring in Ar. has been established<sup>21</sup>. Concave roots have been excluded since in their conjugation  $R_1$  and  $R_2$  ( $R_3$ ) are always separated by a vowel. Whereas verbs *not represented* by class I (*iaqtaʔlu*) have been left out, we have included triliteral nominal roots forming derivative verbs of class I. Such verbs belong to the oldest layer of denominatives, the latter being normally represented only by derived classes (II, V, IV, VIII etc.). The stem of their „imperf.“ begins with a cluster ( $R_1R_2$ -).

Although the above exclusions and inclusions have modified the materials, our statistical results *do not essentially differ* from Greenberg's. Cf. the diagram I, p. 18.

§ 20. Only 2 cases of  $R_1 = R_2$  have been found: *z-z-z*; *h-h-h*. The restrictions on  $R_2$  conditioned by  $R_1$  are the following:

With $R_1 = ' $	absence of $R_2 = ', z, ', g$
„ $R_1 = b$	„ „ $R_2 = b, f, m$
„ $R_1 = t$	„ „ $R_2 = t, d, t, d, z, s, s, d, t, z$
„ $R_1 = t$	„ „ $R_2 = t, d, z, s, s, d, z$
„ $R_1 = j$	„ „ $R_2 = j, t, g$
„ $R_1 = h$	„ „ $R_2 = ', h, h, ', g, h$

<sup>21</sup> On the basis of A. Wahrmond's Arabic-German dictionary.



With $R_1 = h$	absence of $R_2 = ' , h, h, g, k, h$
" $R_1 = d$	" " $R_2 = t, d, d, z, d, t$
" $R_1 = d$	" " $R_2 = t, d, t, d, z, s, s, d, t, z$
" $R_1 = r$	" " $R_2 = r, z, l$
" $R_1 = z$	" " $R_2 = t, d, (z), s, s, s, d, z$
" $R_1 = s$	" " $R_2 = t, d, z, s, s, s, d, z$
" $R_1 = s$	" " $R_2 = s, d$
" $R_1 = s$	" " $R_2 = t, d, z, s, s, s, d, t, z$
" $R_1 = d$	" " $R_2 = t, t, d, s, s, s, d, t, z$
" $R_1 = t$	" " $R_2 = ' , d, d, d, t, z, k$
" $R_1 = z$	" " $R_2 = b, t, t, h, h, d, d, z, s, s, s, d, t, z, g, q, k$
" $R_1 = ' ,$	" " $R_2 = ' , h, h, ' , g$
" $R_1 = g$	" " $R_2 = ' , j, h, h, z, ' , g, k$
" $R_1 = f$	" " $R_2 = b, f, m$
" $R_1 = q$	" " $R_2 = j, z, g, q, k$
" $R_1 = k$	" " $R_2 = t, g, q, k$
" $R_1 = l$	" " $R_2 = r, l, n$
" $R_1 = m$	" " $R_2 = b, m$
" $R_1 = n$	" " $R_2 = l, n$
" $R_1 = h$	" " $R_2 = ' , h, h, z, g, (h).$

§ 21. The chief problem is a neat delimitation of *accidental* empty slots and phonemically pertinent absences. Thus e.g. the lack of ( $R_2 =$ )  $z$  after most consonants functioning as  $R_1$  is clearly due to the relative rarity of this consonantal element.

A clearer insight into the mutual relations of  $R_1$  and  $R_2$  is won by considering phonetically related groups. For the alveolar stops and the interdental and postdental fricatives we obtain the diagram II (— = absence; x = occurrence):

Diagram II

	$t$	$d$	$t$	$d$	$t$	$d$	$s$	$z$	$s$	$z$
$t$	—	—	—	—	—	—	x	—	—	—
$d$	—	—	—	—	x	—	x	—	x	x
$t$	x	—	—	—	x	—	x	x	x	—
$d$	—	x	—	—	—	—	—	x	—	—
$t$	x	x	x	—	—	—	—	—	—	—
$d$	—	—	—	—	—	—	—	—	—	—
$s$	x	x	x	—	—	—	—	—	—	—
$z$	x	x	x	—	—	—	—	—	—	—
$s$	x	x	—	—	—	—	—	—	—	—
$z$	—	—	—	—	—	—	—	—	—	—

There are no exceptions to the rule of mutual incompatibility of all fricatives (*t, d, s, z, ʃ, ʒ*). As regards the stops we state one example of *t* — *t* and four of *d* — *d* (this could confirm the original fricative value of *d*, cf. *infra* § 35). All the other occurrences represent combinations of fricative plus stop, or stop plus fricative. Cf. also the laws of assimilations of *t* to the initial consonant of the verbal root in class VIII (Ar. *igtatala*).

The latter was formed by prefixation of *t* —, and a subsequent metathesis of *t* + *R*<sub>1</sub> to *R*<sub>1</sub> + *t*<sup>22</sup>. The contact of *t* with *t, d, ʃ, d, t, d, s, z, ʃ, ʒ* resulted in a geminate unless in the case of *t* + fricative metathesis prevented total assimilation:

- t* + *t* > *tt*, e.g. *taba'a* 'follow' > *ittaba'a*  
*t* + *d* > *dd*, e.g. *daraka* 'grasp' > *iddaraka*  
*t* + *ʃ* > *ʃʃ*, e.g. *ʃaba'a* 'seal' > *iʃʃaba'a*  
*t* + *d* (> \**ṭd*) > *ḍt* or *ḍd* (also *ṭt*), e.g. *daraba* 'strike' > *iḏtaraba* or *iḏdaraba*  
*t* + *t* > *tt* or *tt*, e.g. *ṭabata* 'stand firm' → *ittabata* or *ittabata*  
*t* + *d* > *dd* or *dd*, e.g. *dakara* 'remember' > *iddakara* or *iddakara*  
*t* + *s* (> \**ts*) > *st* or *ss* (rare), e.g. *saqā* „give to drink“ > *istaqā*  
*t* + *z* (> \**dz*) > *zd* or *zz* (rare), e.g. *zāda* 'increase' > *izdāda*  
*t* + *ʃ* (> \**ṭʃ*) > *ʃt* or *ʃʃ* (rare), e.g. *šabara* 'be patient' > *iṣṭabara* or *iṣṣabara*  
*t* + *ʒ* (> \**ṭʒ*) > *ʒt* or *ʒʒ* (also *ṭt*), e.g. *ʒalama* 'to wrong' > *iṣṭalama* or *iṣṣalama*

The treatment of *t* + *d* proves that *d* has been originally a fricative, the emphatic counterpart of Sem. /*ṣ*/, § 35.

For the V. and VI. class cf. examples like *ṭattāharu* 'cleans himself' (*t* + *t*), *ittāqala* 'was heavy, unwieldy' (*t* + *t*), *ṭaddakkaru* 'remembers' (*t* + *d*), *izzaiiana* 'prepared, adorned himself' (*t* + *z*), *ṭaṣṣaddaḡu* 'justifies himself' (*t* + *ʃ*). Heb. has *niṣṭaddāq* 'we justify ourselves' with metathesis (*t* + *ʃ* > *ʃt*) as against *hizzakkū* 'clean yourselves' with assimilation (*t* + *z* > *zz*), cf. also *tittam'ū* 'you become unclean' (*t-t* > *tt*).

§ 22. Diagram III shows the mutual conditioning of velars, pharyngals and glottals (laryngeals):

There are no combinations between the voiceless elements *ḡ, ḥ, (h)* nor between the corresponding voiced ones *g, ʕ, (ʕ)*. But combinations of voiced plus voiceless, or vice versa, do occur.

<sup>22</sup> In the classes V (*taqattala*) and VI (*taqātala*), „imperf.“ *ṭatqattalu, ṭatqātalu*, or in Heb. (*ḥippa'el*) the old order *t* + *R*<sub>1</sub> is still preserved. Metathesis was originally phonetic only for *R*<sub>1</sub> = spirant, cf. class X (*ša-s-ta-qṭilu*).

Diagram III

	$\underline{h}$	$\dot{h}$	$h$	$\dot{g}$	$^{\circ}$	$^{\circ}$
$\underline{h}$	—	—	—	—	x	—
$\dot{h}$	—	—	—	—	—	—
$h$	—	—	—	—	x	—
$\dot{g}$	—	—	x	—	—	—
$^{\circ}$	—	—	x	—	—	—
$^{\circ}$	x	x	x	—	—	—

§ 23. In the case of *mutual* exclusion a phoneme<sub>1</sub> excludes a following phoneme<sub>2</sub> and *vice versa* (ph<sub>2</sub> excludes a following ph<sub>1</sub>).

Cf. the following empirically stated pairs of incompatible consonants:

I	II
$t/\underline{d}$ , $t/\dot{d}$ , $t/\bar{d}$ , $t/\dot{z}$	$\underline{b}/\dot{g}$ , $\underline{b}/h$ , $\underline{b}/\bar{h}$
$\underline{d}/t$ , $\underline{d}/\underline{d}$	$\dot{g}/h$ , $\dot{g}/^{\circ}$ , $\dot{g}/^{\circ}$
$\dot{t}/\underline{d}$ , $\dot{t}/\dot{d}$ , $\dot{t}/\dot{z}$	$\bar{h}/^{\circ}$ , $\bar{h}/h$
$\bar{d}/t$ , $\bar{d}/\underline{d}$ , $\bar{d}/s$ , $\bar{d}/\dot{s}$ , $\bar{d}/\dot{z}$	$^{\circ}/^{\circ}$
$\dot{d}/s$ , $\dot{d}/z$ , $\dot{d}/\dot{s}$ , $\dot{d}/\dot{z}$	
$s/\underline{z}$ , $s/\dot{s}$ , $s/\dot{z}$	
$\dot{s}/\dot{z}$	

Let us, however, repeat that this empirically stated incompatibility, based simply on the lack of co-occurrence of R<sub>1</sub> and R<sub>2</sub>, is not always a *phonemic* incompatibility. Relying upon the diagrams I and II one would be inclined to regard some of these mutual exclusions as empty slots. Thus according to G. Herdani's calculation of relative frequencies (Word XVIII, 1962, p. 267)  $\dot{z}$  (=  $\dot{t}$ ) has the least frequency in Ar. verbal roots, viz. 0.6%, as against  $r$  which occupies the first place (7.7%).

Other incompatibilities:

After $b$ no $f$ , $m$	} hence the pairs $b/f$ and $b/m$ of mutually excluding elements
„ $f$ no $b$ , $m$	
„ $m$ no $b$	
After $k$ no $q$ , $\dot{g}$ , $\dot{t}$	} hence the pairs $k/q$ , $k/\dot{g}$ , $k/\dot{t}$
„ $q$ „ $k$ , $\dot{g}$ , $\dot{t}$	
„ $\dot{g}$ „ $\dot{g}$ , $\dot{t}$	
„ $\dot{t}$ „ $k$	
„ $k$ „ $k$	
After $r$ no $l$	} hence the pairs $r/l$ , $l/n$
„ $l$ „ $r$ , $n$	
„ $n$ „ $l$	

§ 24. Since in the Sem. verbal system the initial group  $R_1R_2$ - (thus in the imperative) alternates with  $R_1aR_2$ - (in the „perf.“ or in the Akk. stative), the purely phonemic effect of the assimilations postulated above would be as a rule  $R_1R_1$  (or  $R_2R_2$ ) only in the „imperf.“, whereas in the „perf.“ (stative) one would expect *a priori* the preservation of distinct  $R_1$  and  $R_2$ . Morphologically, however, the „imperf.“ with its cluster  $R_1R_2$ - is the *basic form* of the verbal system and the preservation of  $R_1$  and  $R_2$  could be expected only in the case of the „perf.“ serving as the structural basis of the verbal system. It is probable that some exceptions to Greenberg's laws evidenced by the diagrams I and II, may be due to a later stratum<sup>23</sup>. If this inference is correct, there may be traces of semantically related roots of the structure  $R_1-R_2-R_3$  (with  $R_1$  and  $R_2$  originally incompatible) on the one hand, and  $R_2-R_3$  (or  $R_1-R_3$ ) enlarged by one of the procedures mentioned in §§ 3—9, on the other. In the former case etymological writing does not permit to state the (degree of) assimilation of  $R_1$  and  $R_2$  in the „imperf.“ ( $i_aR_1R_2a^*R_3u$ ).

§ 25. The above empirical results have been checked by comparing the relation between  $R_2$  and  $R_3$  of triliteral verbal roots (excluding those in  $R_3 = u, i$ ). As a rule the above formulae hold good for  $R_2 : R_3$  though with certain exceptions, representing chiefly  $R_2 = t$  plus  $R_3 = d, \check{s}$  or  $h$ . Thus:

$h - t - \bar{d}$	$h - t - \check{s}$	$f - t - h$
$' - t - \bar{d}$	$' - t - \check{s}$	$k - t - h$
$q - t - \bar{d}$	$f - t - \check{s}$	$l - t - h$
$l - t - \bar{d}$	$m - t - \check{s}$	$m - t - h$
$m - t - \bar{d}$	$n - t - \check{s}$	$n - t - h$
$u - t - \bar{d}$	$h - t - \check{s}$	$u - t - h$

Besides these cases there is one example of  $-t-z$  ( $l-t-z$ ) and one of  $-t-\bar{d}$  ( $n-t-\bar{d}$ ).

After  $R_2 = h$  we find 3 cases of  $R_3 = ' (b-h', d-h', n-h')$ , one of  $-h-g$  ( $b-h-g$ ).

There are 3 examples of  $-b-m$  ( $\check{s}-b-m, ' -b-m, l-b-m$ ).

Single exceptions to the rules  $-R_2R_3$  are:

<sup>23</sup> The relation between  $R_1R_2a^*R_3$  and  $R_1a^*R_2R_3$  was originally different from the historical one.  $R_1a^*R_2(R_3)$  was proper only to *derivatives* of the personal verb  $R_1R_2a^*R_3$ , whereas in the historical languages  $R_1a^*R_2(aR_3)$  appears also in the *inflection* of the verb, cf. the „perf.“ of Western Sem. and the stative of Akk. Therefore, from the *structural* point of view, the „perf.“ dominates the „imperf.“ since in the latter, owing to assimilation,  $R_1R_2$ - is apt to become ambiguous. For the difference between structural and functional motivation cf. chap. II § 5.



' — *d* — *t*; *m* — *s* — *t*; ' — *d* — *t*; *u* — *t* — *d*; *f* — *t* — '  
*s* — *j* — *g*; *b* — *h* — *q*; *h* — *q* — *g*;  
*j* — *r* — *l*; ' — *l* — *n*; *g* — *l* — *n*;  
*l* — *f* — *m*<sup>24</sup>.

§ 26. The assimilations and incompatibilities treated above are furthermore borne out by testimonies concerning *external sandhi* (between contiguous members of a syntactical group) instanced by J. Cantineau in his *Cours de phonétique arabe* (1941):

Cf. pp. 35 and 42—43: final *-t*, *-d*, *-ṭ*, *-ṭ*, *-d*, *-z* (= *-t*) are assimilated to a following initial *t*, *d*, *ṭ*, *ḍ*, *ṭ*, *ḍ*, *s*-, *z*-, *s*-, *z*-, *š*-, *j*-.

p. 47: *-s + z-* > *-zz-*, and *-z + s-* > *-ss-*

*-s + z-* > *-zz-*, and *-z + s-* > *-ss-*

p. 65, 68: *-k + q-* > *-qq-*, and *-q + k-* > *-kk-*

p. 73, 75: *-ʿ + h-* and *-h + ʿ-* > *-hh-*

*-h + h-* and *-h + h-* > *-hh-*

*-h + ʿ-* and *-ʿ + h-* > *-ʿ-*

p. 24: assimilation of the labials in the Koran: *-b + m-* > *-mm-*,

*-f + b-* > *-bb-*, and *-b + f-* > *-bb-*.

p. 39: *-n* is completely assimilated to a following *ʿ*, *u*, *i*, *r*, *l*, *n*, cf. also the lack of the verbal form *ʿinqatala* for roots beginning with *ʿ*, *u*, *i*, *r*, *l*, *n*. According to some Ar. grammarians there is complete assimilation only for *-n + l-*, *-n + r-*, an incomplete one for *-n + u-*, *i-*, *m-*.

§ 27. The analysis of the Heb. trilateral verbal roots offers a similar distribution of consonants in spite of the reductions and the changes of the original phonemic system. Taking into account both *R<sub>1</sub>R<sub>2</sub>* and *R<sub>2</sub>R<sub>3</sub>* we get (K. Koskinen ZDMG 114, 1964, p. 16—58):

I. For the front consonants (*š* excluded):

	<i>t</i>	<i>d</i>	<i>ṭ</i>	<i>s</i>	<i>z</i>	<i>š</i>	<i>š</i>
<i>t</i>	—	x	—	x	—	x	—
<i>d</i>	—	x	—	—	—	—	—
<i>ṭ</i>	—	—	—	—	—	—	—
<i>s</i>	x	x	—	—	—	—	—
<i>z</i>	—	—	—	—	—	—	—
<i>š</i>	x	x	—	—	—	—	—
<i>š</i>	x	x	x	—	—	—	—

<sup>24</sup> One may safely put aside combinations with *z* = *R<sub>2</sub>* (with *R<sub>3</sub>* = *b* in *h-z-b*, *ʿ-z-b*; *k-z-b*; *u-z-b*; with *R<sub>3</sub>* = *h* in *n-z-h*), or with *z* = *R<sub>3</sub>* (after *ʿ* in *j̣-z-z*; *ḍ-z-z*; *ḷ-z-z*; after *q* in *i-q-z*; *u-q-z*; after *h* in *b-h-z*), cf. above § 23.

Combinations occur like in Ar. between stops and fricatives; *dd* is represented only by *d-d-i* (*u*) „to walk“, a reduction of the reduplicated root *d-d-*, and the same obtains for *š-š-*. The only example of *td* is *'-t-d*, a secondary root containing the infix *t*.

## II. For the glottals (laryngeals) and pharyngeals:

	'	·	h	ħ
'	—	—	x	x
·	—	—	—	—
h	—	—	—	—
ħ	x	—	—	—

Cf. *m-ħ-* 'to clap (one's hands)'.

Other incompatibilities:

*b p m* exclude each other (*-b-m* only in nominal roots)  
*g k q*       "       "       "  
*r l n*       "       "       " (*-r-n* only in nominal roots)

As regards the root *'-r-l* it is denominative, cf. Ar. *garila* 'to be circumcised' from *gurlatu* 'prepuce' (old nominal root).

§ 28. The question is why verbal roots should have avoided the *indirect* neighbourhood of phonemically related  $R_2$  and  $R_3$  since neither in the „imperf.“ nor in the „perf.“  $R_2$  and  $R_3$  formed a cluster. In order to understand this point we must consider the system of trilateral verbal roots taken as a whole. Each of them has two forms, at least potentially, since the formation of a verbal noun  $R_1a^xR_2R_3$  is theoretically always possible. Roots where  $R_2R_3$  become by assimilation  $R_2R_2$  (or  $R_3R_3$  for that matter) are related to inherited roots with  $R_2 = R_3$ , representing a reduced pattern subordinate to the „sound“ pattern whose  $R_2$  and  $R_3$  are always distinguished:

$$\begin{array}{l} | \quad R_1R_2a^xR_3 / R_1a^xR_2R_3 \\ \downarrow \quad R_1R_2a^xR_3 / R_1a^xR_2R_2, \text{ and } R_1R_2a^xR_2 / R_1a^xR_2R_2 \end{array}$$

Now  $R_1R_2a^xR_2$  before vowel becoming  $R_1a^xR_2R_2$  (Ar. *\*iafirru* > *iafirru*) entails the *morphological* shift of  $R_1R_2a^xR_3$  to  $R_1a^xR_2R_2$ .

Here again certain exceptions could be the result of semantic differentiation. Besides verbal roots with distinct but phonemically related  $R_2$  and  $R_3$ , semantically related forms with gemination ( $-R_2R_2$  or  $-R_3R_3$ ) may be expected. In the former case the assimilation of  $R_2$  and  $R_3$  in the verbal noun  $R_1a^xR_2R_3$  would not appear in writing.

§ 29. The exclusion of  $R_1 = R_2$  implies also the impossibility of  $R_1R_2$  if in immediate contact ( $R_1R_2a^xR_3$ ) the two first radicals produce, owing

to total assimilation, a geminate ( $R_2R_2$  or  $R_1R_1$ ). Now from the incompatibility of certain  $R_1$  and  $R_2$  in contact a morphonological rule may be deduced: the geminate  $-R_2R_2$  being ambivalent may be interpreted as  $R_2 + R_2$  (primary function of the geminate  $R_2R_2$ ) or as  $R_1 + R_2$  (secondary function of the geminate  $R_2R_2$ ). Thus given the incompatibility of  $rl$ ,  $lr$ ,  $ln$ ,  $nl$  the geminate  $R_2R_2$  of

$R_1a R_2R_2aR_3$  with  $R_2 = l$  may be also interpreted as  $r + l$ ,  $n + l$

„  $R_2 = r$  „ „ „ „ „  $l + r$

„  $R_2 = n$  „ „ „ „ „  $l + n$

Hence the possibility of  $-n-$  ( $-l-$ ,  $-r-$ ) infixes justified by proportions like  $R_1allaR_3 : R_1anlaR_3 = R_1aTTaR_3 : R_1anTaR_3$ , where  $T = any$  consonant. E.g. *farga'a = faqqa'a* 'snap one's fingers'; *dalbaħa = dabbaha* 'bend one's back'; *ħandala = ħaddala* 'to floor, knock out'.

§ 30. It is necessary to insist in this context upon the *morphological* origin of the so-called 'dissimilation' of geminates in Sem. To put it in a nutshell progressive assimilation of two contiguous consonantal elements  $R_a + R' > R_aR_a$  ( $\bar{R}_a$ ) creates an ambiguity:  $\bar{R}_a = R_a + R'$  or  $R_a + R_a$ . If such an assimilation occurs within a morphological series the ambiguity of  $\bar{R}_a$  may entail morphological consequences. Since this assimilation is not present in  $R_b + R'$ ,  $R_c + R'$  etc.,  $\bar{R}_a$  will be considered in the *first place* as  $R_a + R'$  (primary function), but may be also appreciated in the *second place* as the gemination of the root-consonant  $R_a$  (secondary function). This double possibility may be morphologically exploited if besides the fundamental meaning the series in question has also secondary (contextual) semantic functions. Such a situation may lead to a split into two morphological series:

1)  $\bar{R}_a$ ,  $R_bR'$ ,  $R_cR'$ ,  $R_dR'$  ... (primary semantic function)

2)  $\bar{R}_a$ ,  $\bar{R}_b$ ,  $\bar{R}_c$ ,  $\bar{R}_d$  ... (secondary semantic functions)

The second series is motivated by the proportion:

$R' : \bar{R}' = R_a : \bar{R}_a$  ( $= R_b : \bar{R}_b = R_c : \bar{R}_c = R_d : \bar{R}_d$  ...)

As an example compare the origin of the Germanic verbs with gemination (*Idg. Gramm.* 2, p. 342 ff.)

An identical development is of course also possible in case of regressive assimilation ( $R' + R_a > \bar{R}_a$ ).

§ 31. In this way an original series with morphological gemination ( $\bar{R}_a$ ,  $\bar{R}_b$ ,  $\bar{R}_c$ ,  $\bar{R}_d$  ...) may produce a secondary series with a suffix or infix  $R'$  if assimilation of  $R_a + R'$  or  $R' + R_a$  to  $\bar{R}_a$  is obligatory. We have then to do with what is often called 'dissimilation of geminates'. Thus e.g. regressive assimilation ( $R' + R_a > \bar{R}_a$ ) being obligatory in Akk. for  $n +$  consonant, the dissimilation of geminates ( $\bar{R}$ ) into  $n + R$  becomes possible if 1) lexical or morphological considerations require it; 2) the phonetic conditions, e.g. syncope, have in the meantime rendered

possible the contact of  $n$  with a following consonant. Cf. the origin of the Akk. infix *-tana-* (chap. III § 22).

It is therefore a methodological error to consider  $R'R_b$ ,  $R'R_c$ ,  $R'R_d$  ... (and  $R_bR'$ ,  $R_cR'$ ,  $R_dR'$  ...) as the result of a *phonetic* „dissimilation“ of  $\bar{R}_b$ ,  $\bar{R}_c$ ,  $\bar{R}_d$  and so on, the apparent resolution of  $\bar{R}_b$  into  $R'R_b$  etc. being steered by semantic (lexical or grammatical), not by phonetic factors.

§ 32. The insertion of  $r$ ,  $l$ ,  $n$  serving to form *quadriliteral* derivatives from trilateral roots is a well-known fact:  $R_1anR_2aR_3$ ,  $R_1alR_2aR_3$ ,  $R_1arR_2aR_3$  (besides an attested or potential  $R_1aR_2R_2aR_3$ ). It is a morphological consequence of regressive assimilation of  $r$  or  $l$  or  $n$  with a following  $R'$  <sup>25</sup>.

$R_1aR_2R_2aR_3$  (primary semantic function) versus  $R_1anR_2aR_3$  or  $R_1alR_2aR_3$  or  $R_1arR_2aR_3$  (secondary semantic function). E.g.

*'abbasa* 'scowl' : *'anbasu* 'lion'

*jammada* 'make compact, hard' : *ǧalmadu* 'rock'

*basaga* 'strike (with a stick)' : *barsaga* 'strike (with a whip)'.

Identity of meaning, with 'dissimilation' being purely expressive, is attested e.g. by *ǧandala* = *ǧaddala*; *farg'a* = *faqqa'a*; *dalbaḥa* = *dabbaḥa*; etc. (§ 29).

§ 33. Progressive assimilation may have engendered certain 'determinatives'  $R_3$ , i.e. enlargements of biliteral roots, with semantic function difficult, if not impossible, to establish. If in trilateral roots of the form  $R_1\bar{R}_2$  ( $R_1R_2R_2$ ) the geminate  $R_2$  can be also interpreted as the result of *progressive* assimilation ( $R_2 + R'$ ), then the interpretation  $R_1R_2R'$  besides  $R_1\bar{R}_2$  may engender roots enlarged by the „determinative“  $R'$ , roots representing certain secondary semantic functions of  $R_1\bar{R}_2$ .

Thus if  $R_a + R'$  is assimilated to  $\bar{R}_a$ , we get the proportion

$$R_1R' + R' (R_1\bar{R}') = R_1R_a + R' (R_1\bar{R}_a) = R_1R_b + R' = R_1R_c + R' = R_1R_d + R' \text{ etc.}$$

It seems that the correspondences between trilateral roots with common  $R_1$  and  $R_2$  and different third radicals find their justification in roots of the structure  $R_1\bar{R}_2$ . There is no need to have recourse, in every single case, to an underlying biliteral root  $R_1R_2$  plus a preexisting suffix. The well-known variability of  $R_3$  may be only a consequence of assimilations, the latter being themselves a corollary of the numerous incompatibilities proper to Semitic.

Therefore most consonants could be used as infixes or determinatives. Thus e.g. infixation of  $h$  could be explained by  $hh < h + h$  and  $' + h$ , etc., entailing the possibility of a morphological replacement of TT by hT in

<sup>25</sup> Cf. also above the origin of the Akk. verbal infix *-tana-*.

secondary semantic function. But otherwise than in the case of reduplication ( $R_1aR_2R_1aR_2$ ), which has a semi-grammatical status e.g. in Heb. (*piḥpel*, *pulpal*, *hiḥpalpel*), such infixes function only in isolated cases of lexical differentiation.

The reduplication of the third radical, cf.  $R_1R_2\tilde{a}R_3R_3$  of the classes IX and XI in Ar., appears also in the related form  $R_1aR_2R_3aR_3$ :

Ar. *zagalā* 'suck; feed' : *zuḡlūlu* 'child, young bird'

Heb. 'āmēl = 'umlal 'wither'

Given the so-called „dissimilation“ of the geminate ( $R_3R_3$ ) under the conditions specified above,  $R_1R_2aR_3R_3$  produces  $R_1R_2aTR_3$ , hence also  $R_1aR_2TaR_3$ , with the infix T between the 2<sup>nd</sup> and the 3<sup>rd</sup> radical.

E.g. the stem *qatṭal* (: *qataul* —  $R_1aR_2aTR_3$  :  $R_1aR_2TaR_3$ ) in Ar. *irtahaka* (class VIII) = *raḥṭaka* 'be weak (physically)'.

§ 34. A remark is necessary about the infixes *u*, *i* attested in the forms  $R_1aiR_2aR_3$ ,  $R_1auR_2aR_3$ ;  $R_1aR_2aiR_3$ ,  $R_1aR_2auR_3$ . The type *qattal(a)* appears in „concave“ roots under the form  $R_1auuR_3(a)$ ,  $R_1aiiR_3(a)$ ; the type *qattal(a)* of the 'defective' verbs (with  $R_3 = u, i$ ) would be  $R_1aR_2auu(a)$ ,  $R_1aR_2aii(a)$ . The double semi-vocal may be appreciated either as a geminate (primary function) or as (a)*u*, (a)*i* plus *u* or *i*, respectively (secondary function). Hence the stems *qattal*, *qattal*, *qataul*, *qatail*. E.g.:

Ar. *ḡirābu* = *ḡaurabu* 'stocking'

Heb. *šātān* 'adversary' : Ar. *šaiṭānu* 'διάβολος'

For *qatail* etc. see chap. § IX § 3 (diminutives).

§ 35. An incompatibility not mentioned up to now, viz. Ar. *š/d*, deserves special attention. It is apt to throw a light on the original status of the Sem. emphatic consonants. The quaternary system of Ar.

<i>t</i>	<i>d</i>	and	<i>s</i>	<i>z</i>
<i>t̤</i>	<i>d̤</i>		<i>š</i>	<i>z̤</i>

based on the oppositions *voiceless* : *voiced* and *non-emphatic* : *emphatic*, is an innovation. This is proved by Ar. *z̤* which functioned originally as the emphatic counterpart of *t̤*, i.e. as */t̤/*. Owing probably to the loss of the interdental (*t̤ > t* or *t̤ > s*) the phoneme */t̤/* joined the postdental fricatives as a *voiced* emphatic phoneme opposed to the inherited *š*. In Heb. and Akk., where the interdentals became *š*, *z*, the original */t̤/* also preserved its fricative character (*> š*), whereas in Aram. the change to stops (*t̤ > t*, *d̤ > d*) entailed the simultaneous merger of */t̤/* with the emphatic stop *t̤*.

This makes us suspect the historical status of Ar. *d̤*. The neutrality of emphatic phonemes, as regards voice, being borne out both by East and West Sem.<sup>26</sup> and the fate of */t̤/* in Ar., we may regard Ar. *d̤* as an

<sup>26</sup> Cf. also the absence of an emphatic *b*, *g* in Sem.

emphatic sound originally belonging to another place of articulation, but later incorporated as a *voiced emphatic* into the series of alveolar stops.

§ 36. Now the incompatibility of *š* and *ḏ* seems to indicate that we have to do with an emphatic fricative corresponding to Sem. non-emphatic *š* (> Ar. *š*). Cf. Cantineau, *op. cit.* p. 16. This would agree with the Heb. and Akk. continuation of /š/, viz. *š*. In Ar. *š* and *ṣ* became dissociated owing to the change *š* > *ṣ*, with *š* joining the alveolars as a *voiced emphatic* (opposed to the inherited *t*) in dialects where it has maintained its status as an independent phoneme. In other dialects its merger with *ṣ* (< *t*) is the most common phenomenon.

Aram. *š* : Aram. ' (corresponding to Ar. *š* : Ar. *ḏ*) many be reduced to *š* : \**ḡ* (since *ḡ* > ' in Aram.), with the change of emphatic, i.e. pharyngealized *š* to the fricative *ḡ* (comparable to /š/ > /x/ in Spanish or Protoslavie)<sup>27</sup>.

§ 37. To the syntagmatic exclusion of contiguous *š* and *ḏ* in Ar. corresponds their commutability in semantically related roots<sup>28</sup>. E.g.

Arabic:

*bašaka* 'to cut' : *baḏaka* 'to cut off'

*ḥaša'a* 'to set fire' : *ḥaḏa'a* 'idem'

*ḥaša'a* = *ḥaḏa'a* 'to be humble, subservient'

*šabīta* V = *ḏabāta* 'to seize'

*šaḥḥa* = *ḏaḥḥa* 'to urinate'

*šaḥḥaza* = *ḏaḥḥaza* 'to tear out one's eye'

*šaḥḥaza* = *ḏaḥḥaza* 'to kick'

*jaššā* = *ḡaḏā* 'to cover'

*fašā* 'to spread' : *faḏā* 'to be spacious'

*qaša'a* V' = *qaḏa'a* V 'to be scattered'

*mašaḡa* = *maḏaḡa* 'to chew'

*našīfa* 'to be sucked up' : *naḏafa* 'to suck dry (the udder)'

*hašama* = *haḏama* 'to break'

*ḡaššaha* 'to comment a text' : *ḡaḏḏaha* 'to make clear'

<sup>27</sup> Certain historical clues seem to point to the original *lateral* realization of the phonemic pair /š/ : /ṣ/. Compare on the one hand the incompatibility of contiguous *l* and *š* in Heb. (Koskinen, ZDMG 114, p. 57), on the other hand the treatment of Ar. *ḏ* in Spanish: *l* or *ld* (besides *d*), thus *alcalle*, *alcalde* < *al-qāḏī*.

<sup>28</sup> The commutability of *š* and *ḏ* in *root-final position* (R<sub>3</sub>) has been left out of consideration since in semantically related words they could represent independent „determinatives“ (enlargements of biconsonantal roots). Cf. *baḡaša* = *baḡaḏa* „render one's face fair“; *jaḡaša* 'flee' : *jaḡaḏa* IV 'make flee; hasten'; *ḡaraša* II 'edge on, instigate' = *ḡaraḏa* II; *qaraša* 'cut off' : *qaraḏa*; *qa'aša* = *qa'aḏa* 'bend'; *naḡaša* = *naḡaḏa* 'be loose, shake'; *jaššatu* = *jaḏḏatu* 'noise'.

Hebrew:

*šāḥaq* = *šāḥaq* 'laugh'

§ 38. If the voiced character of Ar. *ḏ* (as against *t*) and *ṣ* (versus *š*) is secondary, *ḏ* being originally an emphatic *š*, *ṣ* an emphatic *t*, we still must answer the question of the rise of the phonemic oppositions *t* : *ḏ* (from *t* : \**š*) and *š* : *ṣ* (from *š* : \**t*).

The change *š* > *ḏ* and *t* > *ṣ* must have been initiated by the merger of *t* and *š*, and of *š* and *t*, in *direct contact* with *phonemically* voiced or voiceless consonants, i.e. before or after *b*, *p* (Ar. *f*); *g* (Ar. *ḡ*), *k*; ' , *h*; *ḡ*, *ḥ*, etc., neutralization in this position being characteristic of voiced: voiceless sounds. Thus e.g. \**šk* (*ḏk*) > *tk*; \**tk* (*ṣk*) > *šk*; on the other hand *tb* > \**šb* (*ḏb*) and *šb* > \**tḥ* (*ṣb*) etc. Such a merger could have in certain cases entailed morphological ambivalences and splits, e.g.:

1)  $R_1 = t/\dot{t}$

*ṭabara* 'leap, jump' (*ṭaburu*) : *ḏabara* 'jump (with legs drawn together)' (*ṭabiru*)

*ṭafara* 'leap' = *ḏafara* (*ṭafiru* : *ḏafiru*)

*ṭaqqa* 'emit a sound' : *ḏaqqa* '(re)sound' (*ṭatquq* : *ḏatqiq*)

$R_2 = t/\dot{t}$

*ḥaṭiba* 'be a (dingy) green' : *ḥaḏiba* 'to green' (*ḥuṭbatu<sup>n</sup>* : *ḥaḏbu<sup>n</sup>*)

*ṭaba* II, IV 'damage, injure' : *aḏaba* 'offend, beat' (*aṭbu<sup>n</sup>* : *aḏbu<sup>n</sup>*)

*ḡaṭā* = *ḡaḏā* 'be dark' (*ḡaṭū* : *ḡaḏū*)

*qataba* = *qadaba* 'cut' (*qatbu<sup>n</sup>* : *qadbu<sup>n</sup>*)

*qaṭa'a* V = *qada'a* V 'be cut (off)'

*qaṭama* = *qadima* 'nibble' (*ḡaṭimu* : *ḡaḏamu*)

*maṭaḥa* : *maḏaḥa* 'stain one's honour' (*maṭḥu<sup>n</sup>* : *maḏḥu<sup>n</sup>*)

*naṭifa* = *naḏifa* 'be stained with vice or crime'

*ḥaṭala* = *haḏala* IV 'pour down continuously or abundantly' (*ḡaṭilu* : *ḡaḏilu*)

$R_3 = t/\dot{t}$

*'abata* VIII = *'abiḏa* 'stand still'

*ḥaṭita* = *ḥaḏita* 'be invalid, useless, futile'

*qabata* = *qabada* 'seize with one's hand' (*qabtu<sup>n</sup>* : *qabdu<sup>n</sup>*)

*nabata* 'gush, flow (forth)' : *nabada* 'throb' (*nabtu<sup>n</sup>* : *nabdu<sup>n</sup>*)

*ḡaḥata* = *ḡaḥada* 'render grey-haired' (*ḡaḥtu<sup>n</sup>* : *ḡaḥdu<sup>n</sup>*)

2)  $R_2 = š/\dot{š}$

*ḥaṣṣa* IV 'allot a portion, a part' : *ḥaṣṣa* 'get one's part' (*ḡaḥṣiṣ* : *ḡaḥṣuṣ*)

*ḥaṣara* IV 'keep off, hinder; enclose' = *ḥazara* (*ḡaḥṣiru* : *ḡaḥzuru*)

*šaṣṣa* 'be burdensome' : *šaṣṣa* 'be hard, painful' (*ḡaṣṣiṣ* : *ḡaṣṣuṣ*)

*'aṣṣa* = *'aṣṣa* '(op)press' (*ḡa'ṣuṣ* : *ḡa'ṣuṣ*)

'ašaba 'dry up' : 'ažaba 'become dry' (ia'sibu : ia'žibu)

ḡašaba 'work hard; continue' : ḡažaba

R<sub>3</sub> = s/z

ḡaqaša 'knock to pieces' : ḡaqaža 'strike violently' (ḡaqsu : ḡaqsu').

The alternations R<sub>3</sub> = t/d, s/z could also be accounted for, though less satisfactorily, by the merger of voiceless and voiced consonants before the *t*-endings of the perfective (-*ta*, -*ti*, -*tu*, -*tumā*, -*tum*, -*tunna*). In the case of R<sub>3</sub> we may also have to do with different „determinatives“.

At any rate it is examples like those quoted above which are liable to explain the rise of a new phonemic category, the voiced emphatics.

§ 39. In many other cases the oppositions *t* : *d*, *s* : *z* occurring in synonyms are *secondary*. They have not been conditioned by phonemic surroundings, but must be attributed to a sporadic change *voiced* > *voiceless* or *vice versa*, frequently attested also elsewhere and due to semantic contamination, distant\* (partial or total) assimilation, etc. Cf. *ṭaraḥa* = *ḍaraḥa* III 'throw (away)'; *ṭariṭa* = *ḍariṭa* 'be thin-haired'; *ṭana*' = *ḍana*' 'be ashamed'; 'aṭima = 'aḍima 'be angry'; ṣariṭa = ṣariḍa 'choke'; qaraṭa = qaraḍa 'cut into small pieces'; haraṭa = haraḍa 'tear'; ḡaniša 'be tightened' : ḡanaža 'oppress'; fāša 'cease' : fāža 'die'; našara and nažara 'help, render assistance'.

§ 40. Finally there are examples of the merger of Sem. \*ṭ and \*ṣ in Ar., due to dialects where *d* (< \*ṣ) has lost its independent phonemic status : *ḍajja* = *ṣajja* 'clamour, shout'; *baḍḍa* = *baṣṣa* 'touch (the strings of an instrument)'; *baḍru* : *baṣru* 'clitoris'; *ḡaḍḍa* II = *ḡaṣṣa* 'run swiftly'; *ḡaḍraba* = *ḡaṣraba* 'draw the bow'; 'aḍḍa = 'aṣṣa 'bite'; 'anḍaḥa = 'an-ṣaḥa 'form the grain'; naḍifa = naṣufa 'be clean'.

§ 41. The above split between roots containing *t* and *d*, or *s* and *z*, may be paralleled with examples of the treatment of other phonemically voiceless R<sub>1</sub> before voiceless R<sub>2</sub> and *vice versa* (*t*/d, *h*/ḥ, *ḡ*/ḡ, *s*/z; also, from the historical point of view, *f*/b, *k*/j).

R<sub>1</sub> voiceless + R<sub>2</sub> voiced > R<sub>1</sub>R<sub>2</sub> voiced:

*t* + ' > *d*' : *ta'aba* 'let flow, shed' / *da'aba* (V. form) 'flow continually'

*h* + *b* > *b* : *habala* = 'abala 'bind with cords'

*h* + *j* > *j* : *hajara* = 'ajara 'hide, keep off', *iḥtajafa* 'renounce, give up' / *a'ajafa* 'abstain from (food)'

*h* + *z* > *z* : *hażuma* = 'aḡuma 'be firmly determined'

*ḡ* + *b* > *ḡb* : *ḡabana* = *ḡabana* 'tuck in, shorten (a garment)'

*s* + *j* > *zj* : *sajala* 'throw down' / *zajala* 'throw away'

*s* + *d* > *zd* : *sadā* = *zadā* 'stretch out one's hand for a th.'

*s* + ' > *z'* : *sa'ala* = *za'ila* 'be lively, brisk'

*f* + *d* > *bd* : *fadaḥa* = *badaha* 'depress (deeply)'



$R_1$  voiced +  $R_2$  voiceless  $>$   $R_1R_2$  voiceless:

$b + \text{h} > fh$  : *baḥata* 'examine, scrutinize' = *faḥata*

$d + \text{h} > th$  : *daḥaḥa* = *taḥaḥa* 'drag, carry away'

$z + k > sk$  : *zakara* = *sakara* 'fill' (*maḥa*)

$' + f > hf$  : *'afaša* = *ḥafaša* 'gather, collect'

$' + k > hk$  : *'akaša* = *ḥakaša* 'gather, collect'.

Similar instances may be adduced for *emphatic* : *voiced* etc., like  
*ṣabara* : *zabara* 'bear patiently'.

## Chapter II. THE RISE AND ROLE OF VOWEL-GRADATION IN SEMITIC

§ 1. One of the most important distinctions to be made in Sem. morphology is that between *phonemic* and *morphophonemic* or morphological alternations. Whereas in Class. Ar. the opposition *qatala* 'he killed' : *qātala* 'he fought' (trans.) implies a morphological function of *ā* expressing the conative value of the derivative, the short vowel of a form like *taqūlna* 'you speak' (fem.) versus *taqūlūna* (masc.) represents a mechanical (predictable) shortening of the length *ū* in a closed syllable and does not play a role on the „plane of content“.

Two tenets of structural linguistics must be kept in mind when investigating morphophonemic alternations (called henceforth *vowel-gradation*, *apophony* or *ablaut*):

1) Historically the various kinds of apophony go as a rule back to purely phonemic alternations.

2) But the relation of apophony to phonemic alternation is only *indirect*.

§ 2. Let us assume that in the „plane of expression“ there is an alternation between the phonemes  $ph_1$  and  $ph_2$ ,  $ph_2$  being replaced by  $ph_1$  in certain determined surroundings (under certain *phonemic* conditions), whereas in other surroundings there is a direct phonemic opposition  $ph_1 : ph_2$ . Then  $ph_2$  will be the (so-called) marked or positive,  $ph_1$  the unmarked or negative member of the phonemic opposition. The same phoneme  $ph_1$ , appearing in points of neutralization (i.e. outside the opposition) is called neutral or „archiphoneme“ ( $Ph$ ). Therefore the term „archiphoneme“ refers only to a special phonemic *function* of  $ph_1$ , viz. its appearance instead of  $ph_2$  in points of neutralization.

Let us further assume that  $F$  and  $F'$  are symbols for basic word and derivative, respectively.  $F'$  being  $F + a$ , where  $a$  denotes an affix (suffix, prefix etc.), we get the following morphological relation and hierarchy:

Basic forms	↓	$F_1$	$F_2$	$F_3$	...
Derivatives		$F_1 + a$	$F_2 + a$	$F_3 + a$	...

Now in some derivatives the addition of the affix may entail a neutralization of the phoneme  $ph_2$  occurring in the corresponding basic forms ( $ph_2 > ph_1$ ). Opposed to the phoneme  $ph_2$  of  $F$  the *neutral*, hence ambiguous,  $ph_1$  of  $F + a$  will be interpreted as a *negative*  $ph_1$ , and the replacement of  $ph_2$  of the basic term by  $ph_1$  of the derivative will be appreciated as a morphonemic feature accompanying the affixation of  $a$ . I.e. if a  $F$  contains  $ph_2$ , the affixation of  $a$  will entail the morphonological change  $ph_2 > ph_1$ . The forms  $F'$  ( $= F + a$ ) in which the replacement is merely intrinsic, act therefore as mediators (*voces mediae*) between phonemic alternation and apophony. But the decisive factor is the interpretation of the „archiphoneme“ imposed by the *morphological* opposition between the basic form and its derivative.

§ 3. A variant of the above scheme is represented by  $F_1 F_2 F_3 \dots$  being not separate lexical items, but inflectional forms of the same word,  $F_1 + a, F_2 + a, F_3 + a \dots$  being the inflectional forms of the corresponding derivative. In the basic word certain  $F$ , e.g.  $F_m, F_n \dots$ , contain  $ph_1$  instead of  $ph_2$  owing to neutralization, the same distribution occurring in the inflectional forms  $F'_1, F'_2, F'_3 \dots$  of the derivative. Now the „archiphoneme“  $ph_1$  of  $F_m, F_n$  will be appreciated as  $ph_2$  since it is motivated by  $ph_2$  of  $F_1 F_2 F_3 \dots$  of the same word. Hence, by opposition, the interpretation of the  $ph_1$  of  $F'_m F'_n$  as  $ph_1$  in the derivative. This opposition, carried over to the inflectional forms  $F'_1 F'_2 F'_3 \dots$  creates a *difference of vowel-grade* ( $ph_2 : ph_1$ ) between  $F_1 F_2 F_3 \dots$  and  $F'_1 F'_2 F'_3 \dots$  with a neutralization of apophony between  $F_m F_n$  and  $F'_m F'_n$ .

§ 4. The change of a phonemic alternation into apophony must be explained by the ambivalence of the „archiphoneme“, by a *polarization* of its inherent values due to the pressure of the basic form upon the derivative and the opposition of the latter to the former.

We have seen that apophonic relations as described above may occur not only between a basic form and its derivative, but also between two inflectional forms of one word. Though it would not be appropriate e.g. to speak of the *derivation* of an oblique case from the corresponding nom., yet very often the former is *predictable* on the basis of the latter. In general it may be said that whereas derivatives are predictable since they are built according to certain grammatical rules, there are also predictable forms which are not derivatives. The essential difference between the two groups of predictable forms boils down to the fact that whereas all of them are *structurally* motivated, some only are at the same time *functionally* (semantically, syntactically) motivated.

§ 5. The difference between these two kinds of motivation is illustrated by such examples as Fr. *masc.* : Fr. *fem.* in the *inflection of the adj.* From the functional point of view it is the *masc.* form which is basic since the

masc. may have a neutral value (e.g. *heureux qui...*; *les noirs et les blancs*). But the structural relation between these two inflectional forms is just the opposite. If there is a formal difference between the two genders, then it is the fem. which is basic, the corresponding masc. being formed by means of the suppression of the last pronounced consonant of the fem. form, e.g. *blanche* : *blanc*, *fraîche* : *frais*, *verte* : *vert*, *chaude* : *chaud*, and so on.

As regards hierarchy structural motivation is subordinate to functional motivation. This means that we have the right to posit structural motivation only on the basis of functional affinity: to put it crudely the forms in question must be semantically or syntactically related. Thus the relation Fr. fem. /frɛʃ/ : masc. /frɛ/ etc. is legitimate since the semantic affinity between fem. and masc. may be proved by the functionally unmarked character of the masc. and the marked character of the fem. But the relation /frɛʃ/ : /frɛ/ is only structural, not functional.

§ 6. It would be erroneous to consider the root of the Sem. verb as a merely consonantal skeleton. Within the primary conjugation (cf. Ar. *qatala*, *qatila* or *qatula*) there is only one paradigm whose vocalism (of R<sub>2</sub>) is basic or unpredictable; the rest of the conjugation may be inferred owing to certain well-defined laws of Sem. *apophony* (vowel-gradation, ablaut). E.g. in West Sem. the fundamental paradigm of the conjugation is the „imperf.“. In relation to *ʔaktubu* (trans.) the paradigms *kataba*, *ʔuktabu*, *kutiba*, the participle *kātibu* have a predictable vocalism of R<sub>2</sub> and R<sub>1</sub>. The vowel of R<sub>2</sub> of the „imperf.“ being *u*, the verbal root is *k(u)tub* and not simply *k-t-b*. The vocalism *u* of the „imperf.“ is basic, and undergoes determined changes in the other paradigms of the conjugation. The vowels of the „perf.“ are R<sub>2</sub> = *a*, R<sub>1</sub> = *a*; those of the pass. „imperf.“ are R<sub>2</sub> = *a* plus prefix = *u*, etc. Conversely, none of the paradigms opposed to the „imperf.“ permits to foresee the vowel *u* of *ʔaktubu*, since *i* or *a* (in the neighbourhood of „laryngeals“) would be also possible.

Ar. *ʔaqtulu* : *qatula*, with *qatula* predicting the vowel R<sub>2</sub> = *u*, is an innovation. The old form is *ʔiqṭalu* (§ 31 and chap. IV § 21). As regards the relation „imperf.“ *ʔiqṭalu* : perf. *qatila* or *qatula*, the predictability of the „imperf.“ is only secondary. In actual fact *qatila* itself implies *qatula* (with a difference of meaning) so that the relation is *ʔiqṭalu* → *qatila* → *qatula*.

§ 7. Thus every vocalism of the verbal forms of the basic class I, of the derived classes, of the deverbative nouns and adjectives, must be traced back, directly or *indirectly*, to the fundamental vocalism *via apophonic transformations*. The relation to the fundamental vocalism is indirect in case of intermediate members, cf. the example *ʔiqṭalu* : *qatula* via *qatila*. R<sub>1</sub> = *a*, R<sub>2</sub> = *u* of *qatula* must be decomposed into *a > i* (*ʔiqṭalu* : *qatila*) and *i > u* (*qatila* : *qatula*).

Another example: In Akk. the presents *iparras* and *iparrus* determine the vowel of the pret. *iprus* which is therefore predictable, whereas in relation to the present *iparris* the vowel of the corresponding pret. does not show apophony (*ipris*).

§ 8. It is clear that in each individual case apophony must be defined by the confrontation of the given form with its *immediate* base. Thus when comparing Ar. *īuqattilu* with *īaqtu/īlu* and the corresponding passive *īuqattalu* with *īuqtalu* we state:

in the first case: gemination of  $R_2 +$  apophony  $u > i$  as morpheme,  
in the second case: gemination of  $R_2$  as morpheme.

But the vocalism  $a > u$  of the prefix of *īuqattilu* (as against *īaqtu/īlu*) is implied by the gemination of  $R_2$  (no gemination without  $u$  of the prefix).

When confronting the passive *īuqtalu* with the active *īaqtu/īlu* we find the morpheme: apophony  $a > u$  in the prefix plus  $u/i > a$  in the radical.

Finally, the opposition *īuqattilu* (active) : *īuqattalu* (passive) consists in the apophony  $i > a$ .

§ 9. In the historical Sem. languages the following types of vowel-gradation are attested:

1) vowel : zero, e.g. *qatala* (verb) : *qatlu<sup>n</sup>* (noun); 2)  $i u > a$ , e.g. *īaqtīlu*, *īaqtulu* : *īīqtalu* (state), *īuqtalu* (pass.); 3)  $u > i$ , e.g. *īaqtulu* : *īuqattīlu* (intens.); 4) short : long, e.g. *īaqtulu* : *qatūlu<sup>n</sup>*.

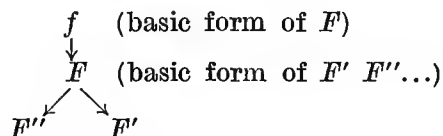
1) and 4) may be called quantitative, 2) and 3) qualitative apophony. The range of qualitative apophony is a priori phonemically restricted. A change like  $i u > a$  leaves the vocalism  $a$  of the basic form intact (e.g. *īaqtalu* : *īīqtalu* or *īuqtalu* under 2), and the same is true of  $u > i$  (e.g. *īaqtīlu* > *īuqattīlu* just as *īaqtulu* : *īuqattīlu* under 3).

Apophony being a morphophonemic or morphological and not a phonemic phenomenon, reverse relations like  $a > i$ ,  $u$ , or  $i > u$ ,  $\bar{a} > a$  etc., due to morpho-semantic shifts, are also liable to take place. In Ar. *kitābu* 'book' : *kutubu* 'books' the pl. is characterized by a double vowel-gradation:  $u$  instead of  $\bar{a}$  (a cumulation of quantitative and qualitative apophony) between the 2<sup>nd</sup> and 3<sup>rd</sup> radical ( $R_2$ - $R_3$ ), and  $u$  for  $i$  between the 1<sup>st</sup> and the 2<sup>nd</sup> radical ( $R_1$ - $R_2$ ). The reason why we consider  $i u > a$ ;  $u > i$ ;  $a > \bar{a}$  etc. as being prior to  $a > i$ ,  $u$  etc., is simply the fact that the corresponding *phonemic* alternations are still attested in the historical languages, chiefly in Ar., cf. *infra*.

§ 10. As a rule apophony accompanies affixation. Thus in the case *īaqtīlu* : *īuqattīlu* the marker of the intens. value of the derivative is the discontinuous morpheme consisting of *geminated*  $R_2 + a > u$  (in the prefix), whereas the apophony of the root-vowel in *īaqtulu* : *īuqattīlu* is only a redundant feature of the intens. form. On the contrary, in the pass. form *īuqtalu* as against an act. *īaqtalu* the ablaut in the prefix is a full mor-

pheme, the ablaut in the root-vowel of forms like (*i*aqtilu:) pass. *i*uq<sup>h</sup>tal<sup>u</sup> being again redundant. The ablaut of the root-vowel in the intens. or in the pass. is a redundant trait simply because it does not occur in all specimens of these categories, the only functionally relevant feature of the pass. being the ablaut of the prefixal vowel, and in the case of the intens. the discontinuous morpheme *geminated*  $R_2 + \text{vowel } u \text{ of the prefix}$ . In the intens. the change of the prefixal vowel always accompanies gemination, whereas the *i*-ablaut of the root-vowel is possible only for an original *a* or *u*.

§ 11. Therefore from the *morphological* point of view apophony may have a triple value: 1) part of a discontinuous morpheme as the *u*-vocalism of the intens. *i*uqattilu; 2) full morph(on)eme as the *u*-vocalism of the pass. *i*uq<sup>h</sup>tal<sup>u</sup>; 3) *morphoneme* with *semantic zero-value* as the root-vowels of *i*uqattilu and *i*uq<sup>h</sup>tal<sup>u</sup> (both replacing indiscriminately *a*, *i*, *u* of the basic verb). These distinctions are indispensable for an adequate morphological analysis. The value of apophony must be in each case established by *pertinent* oppositions. Thus e.g. it would not do to posit an arbitrary opposition between the pass. *i*uq<sup>h</sup>tal<sup>u</sup> and the intens. *i*uqattilu and consider *i* as a part of a discontinuous morpheme of *i*uqattilu. In each case there is only one basic form to which *F'* is to be referred, even if semantic evolution has entailed *secondary* functions of *F'*, i.e. its association either with another derivative of *F* or with the basic form of *F*<sup>1</sup>. A relation like



may in course of time shift to  $f \rightarrow F'$ , or  $F'' \rightarrow F'$ . Prior to such a development the relation  $f \rightarrow F'$  or/and  $F'' \rightarrow F'$  can be only a *secondary* function of *F'* (if at all).

§ 12. Whereas the phonemic basis of the *nil-grade*, as in *qatala* : *qatlu*<sup>n</sup> remains obscure (perhaps because of our ignorance of Protosem. accentuation), all the other kinds of vowel-gradation may be directly or indirectly derived from corresponding *phonemic alternations*, still attested in Ar., partly also in other West Sem. languages.

A change of short *i u* to *ǣ*, i.e. a merger of short *i u* with *ǣ*, must have taken place in Proto- or Common Sem. in the neighbourhood of glottals (laryngeals *ʾ*, *h*), pharyngals (*ʕ*, *ħ*), and velars (*g*, *ḡ*). An overall term „laryngeals“ will be used for these phonemes. This is generally admitted (cf.

<sup>1</sup> Cf. *The Infl. Cat. of IE.* p. 45.

Brockelmann *GVG* I, p. 194) and borne out by the „imperf.“, i.e. the basic verbal form (Ar.) *iaf'alu*. The root-vowel is *a*, not *i u*, if  $R_2$  or  $R_3$  is a „laryngeal“. Similarly in Hebrew cf. Gesenius *Heb. Gr.*, 1909, p. 177, 179. Two restrictions concerning this formula must be briefly mentioned:

1) Exceptions with *i u* occur more frequently after than before laryngeal<sup>2</sup>, and

2) in general exceptions are in the historical languages admissible since in the meantime the change in question ceased to be a phonemic alternation. Forms of derived conjugations like *iufa'ilu*, *iuf'ilu*, derivatives like Ar. *mafiḥ* = Hebr. *mafteaḥ* etc., date from Proto- or Common Sem. These are forms which being *motivated* easily undergo rearrangements<sup>3</sup>.

§ 13. To quote, by anticipation, an example of the importance of *i u > a* in the verbal system, let us consider the split between the indicative in *-u* (*iaqtulu*) and the subjunctive in *-a* (*iaqtula*) which finds its motivation in the change *u > a* after „laryngeal“:

↓	primary (indicative) function: <i>iaqtulu</i> <i>*iaqta'a</i> I	↓
↓	secondary (modal) function: <i>*iaqtulu</i> <i>iaqta'a</i> II	↓

Owing to the equivalence of the desinences *-u* in *iaqtulu* and *-a* in *iaqta'a* I the ending *-a* of the latter form is appreciated as an *-u* (shifted *phonemically* to *-a*). In contraposition to this *\*-u* the ending of *iaqta'a* II is interpreted as a real *-a* which introduced after  $R_3$  = non-„laryngeal“ permits a differentiation between the indic. in *-u* (*iaqtulu*) and the subj. in *-a* (*iaqtula*). The subj. in *-a* is attested in O. Akk. (Gelb *Sequ. Reconstruction of Proto-Akk.* p. 101 ff.), in the language of the el-'Amarna glosses and in Ugar., in Ar. and perhaps in Heb. (cohortative in *-āʔ*).

For an analogical split between the gen. in *-i* and the acc. in *-a* cf. chap. VII § 2.

§ 14. The apophony *u : i* continues to be accompanied by a parallel phonemic alternation at least in Ar. The assimilation of both *uḯ* and *iḯ* to *iḯ* is well attested in this language:

<sup>2</sup> Cf. Ar. *ša'ara* 'notice' : *iaš'uru*, or *raja'a* 'return' : *iarji'u*; also Ar. 'inabu 'grape' = Hebr. 'enāb = Aram. 'inbā = Akk. *enbu*. On the other hand the restriction of the change *i u > a* to a following „laryngeal“ (in the broad sense) seems to be countered by the fact that in Akk. the apophony *u : a*, common in trans. verbs, is lacking in verbs with  $R_2$  = Sem. „laryngeal“. The above restriction would not, however, influence our inference, viz. the merger of *i ḯ* with *ā* in certain phonemic surroundings, with *ā* as the unmarked member.

<sup>3</sup> For the reason of the decadence of the phonemic alternation *i ḯ > ā*, that is of the possibility of the reappearance of *i ḯ* in the neighbourhood of „laryngeals“, see below. The restituted vowels *i ḯ* often undergo in the historical period *secondary* phonetic changes due to the contact of „laryngeals“, which may well be left out of consideration in this context.

a) in the verbs with  $R_3 = u, i$  the types  $R_1aR_2uiā$ ,  $R_1aR_2iūa$  have been completely eliminated, both becoming  $R_1aR_2iā$ , e.g. Ar. *raḍiā* „be glad, content“ < *raḍiūa*;

b)  $-ui-$  >  $-iī-$  before vowel, e.g. *marmiiū* < *\*marmūiū*, pass. part. < *ramā* ‘throw’; *‘udiiū* < *\*‘udūiū*, verbal noun < *‘adā* ‘coagulate’ etc.; *‘uṣiiū* < *‘uṣūiū*, pl. of *‘aṣā* ‘stick’; *iīūnu* < *\*iūiūnu*, pl. of *‘ainu* ‘eye’; *biāitu* < *biūiāitu*, diminutive of *baitu* ‘house’;

$-ui-$  >  $-iī-$  >  $-ī-$  before consonant, e.g. *mudīru* < *mudūiūru* < *\*mudūiūru*, part. IV < *dāra* ‘turn’; *biḍu* < *biūiḍu* ‘white’, pl. of *‘abiāḍu* <sup>4</sup>;

c)  $-iū-$  >  $-iī-$  before vowel, e.g. *ṣaqiūū* (*ṣaqiūu*) for *ṣaqiūu* ‘unhappy, miserable’; *iīāsu* for *iūāsu*, verbal noun < *\*aḥasa* (*‘āsa*) ‘requite’;

$-iū-$  >  $-iī-$  >  $-ī-$  before consonant, e.g. *mabī‘u* < *mabiū‘u* (< *\*mabiū‘u*), pass. part. < *bā‘a* ‘sell’; *iṣālu* < *\*iūṣālu* (*maṣdar* IV from *ḥaṣala* ‘bind’); *mīrāḥu* ‘heritage’ < *\*mīrāḥu* (*ḥarāḥa*);

part. *gāzi* goes back to *\*gāziūu* (*gāzā* ‘covet’), the *maṣdar* form V *ta-gazzi* to *\*ta-gazziūu*.

d)  $-ui-$  and  $-iū-$  become  $-iī-$ , cf. *‘aiiāmu* ‘days’ < *\*‘aiūāmu*; *ṭaiūu* < *\*ṭaiūu*, verbal noun of *ṭayā* ‘fold’; *kaiūu* < *\*kaiūu*, v. n. of *kayā* ‘cauterize’.

Apparent exceptions are in actuality morphological innovations. Of *iabisa* ‘to dry’ (intrans.) the causative is *iūbisu*, instead of *iībisu* < *\*iūiībisu*, in order to restore the characteristic vowel *u* of the prefix of class IV <sup>5</sup>, the same treatment being the rule for all verbs with  $R_1 = i$ . Hesitation between *ī* (phonetic) and *ū* (morphological) occurs in the fem. forms of the elative (type *qutlā*), e.g. *ṭībā* and *ṭūbā* ‘better’ < *‘aṭiābu*, *ḍiqā* and *ḍūqā* ‘narrower’, *kisā* and *kūsā* ‘clever’, and so forth. A similar hesitation occurs in some examples of the verbal noun *qutūlu*: cf. *ḥutūiūu* < *ḥutūiūu* (*iaṭī* ‘stands on his toes’) or *mudūiūu* < *mudūiūu* (*iamālī* ‘passes’), which are phonetic, versus *ḥutūūūu*, *mudūūūu*, morphological innovations built according to the general pattern *qutūlu*.

§ 15. Examples like Hebr. *bachāḥ* ‘weeping’, *bārūḥ* ‘bread of consolation’, with original  $R_3 = i$ , do not prove the passage of *ui* to *ū*. Since the distinction between the two groups, with  $R_3 = i$  and  $R_3 = u$ , was in Hebr. obliterated in the basic forms of the personal verb, it is doubtful if it has been preserved in the derivatives of the type *qatultu*. It is therefore not possible to affirm anything about the glide inherent in the *ū* of *bāchūḥ*,

<sup>4</sup> Forms like *gānī* < *\*gāniūu* ‘rich’ or *qīla* ‘was said’ < *\*quḥila* are perhaps to be explained as contracted from *\*gāniū*, *\*quḥila* after the disappearance of intervocalic *i, u*. At any rate they seem to reflect late developments. — Contractions of *ī + ū*, *ū + ī* are dominated by the long vowel: Ar. *iarmi-ūna* ‘they throw’ > *iarmi-ūna*; *taḍ-ū-ina* ‘you call’ (fem. sing.) > *taḍ-ina*.

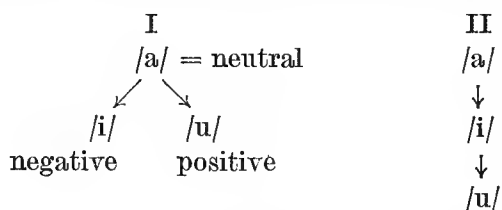
<sup>5</sup> Notice that in Ar. this vocalism is a full morpheme, cf. *iaqtīlu* (cl. I): *iūqtīlu* (cl. IV).



*bārūḫ*. In *ḡūṣar* 'is being shaped, formed' (Is. 54, 17) the prefixal vocalism has been restored according to the model *ḡuqtalu*.

§ 16. It is just possible that in Sem. the change  $u > i$  occurred also in the suffix *-uṭi*. The regular masc. pl. in *-ū* (nom.), *-ī* (gen.-acc.) could, just like the „broken“ plurals of South Sem., represent an old collective. The suffix *-uṭi* (+ *-tu* in *-ūtu* < *-uṭtu*) forms abstract nouns in Akk., Heb., Aram. and Eth. It also functions as the pl. ending of masc. adjectives in Akk., e.g. *damqu* 'good': pl. *damqūtu*. Therefore the nom. *-uṭu* > Akk. Ar. *-ū*, gen. *-uṭi* > *-wi* > Akk. Ar. *-ī*, may continue an old collective suffix. This is more probable than a hypothetical lengthening of the sing. endings *-u*, *-i* (> pl. *-ū*, *-ī*) which would be without a parallel, since lengthening is attested only in roots and in (detachable) suffixes like *-at*-, *-an*-, *-am*-, cf. *infra* § 21—22. The abstract value of Heb. *-īm*, as in *bḥūrīm* 'youth', *zqunīm* 'old age' seems to point to a semantic development *abstract* > *collective* > *plural*, well attested in the case both of 'broken' plurals and of the pl. ending *-āt*- (chap. VIII).

§ 17. The above changes ( $i u > a$ , and  $u > i$ ) brought about special phonemic relations between the three fundamental timbres  $u i a$ . As long as the first formula ( $i u > a$  in the neighbourhood of „laryngeals“) was phonemically valid,  $a$  functioned as the unmarked member of the opposition  $a : i$  and of the opposition  $a : u$ , whereas between  $i$  and  $u$  there was no direct relation. They were aequipollent, i.e. were opposed to each other in all phonemic surroundings except in the neighbourhood of „laryngeals“ (where each of them was replaced by  $a$ ). But after the change  $u > i$  (under the above conditions § 14 a) to d)  $i$  became the negative member of the opposition  $i : u$ . Hence the following phonemic pattern:



I and II with  $a$  unmarked in relation to both  $i$  and  $u$ , and II with  $i$  unmarked in relation to  $u$ . This is important. An apophonic change of  $u$  to  $i$  automatically involves  $a > i$  since  $i = a + m_1$ , and  $u = a + m_2$ <sup>2</sup>. Therefore an apophonic shift  $a + m_2 > a + m_1$ , equalling  $a + m_2 > a > a + m_1$ , implies  $a > a + m_1$ , etc. This phonological hierarchy explains certain apophonic facts to be mentioned later.

<sup>2</sup>  $m_1 m_2$  denote the phonemic features of  $i u$  distinguishing them from  $a$ , e.g.  $m_1$  = front (non-back) or acute (non-grave),  $m_2$  = back or grave.

An interesting instance of the hierarchy  $i$  (unmarked) :  $u$  (marked, i.e. included under  $i$ ) is the prothetic vowel of Ar., cf. the imperat. *iqtal* (< *iaqталu*), *iqtil* (< *iaqtilu*), *uqtul* (< *iaqtulu*). The original timbre of this vowel is  $i$  since both *iaqталu* and *iaqtilu* imply  $i$ - in the imperat. But  $u$  is *directly* subordinate to  $i$ , therefore  $i$  (root)  $\rightarrow i$ - (prothetic vowel) entails  $u \rightarrow u$ -. For another explanation cf. § 32.

§ 18. The „lengthened grade“ ( $a : \bar{a}$ ,  $i : \bar{i}$ ,  $u : \bar{u}$ ), whose phonemic basis is still attested in Class. Ar. (cf. § 1), seems to represent the most recent phase of Sem. apophony. The shortening of long vowels in closed syllables must have at the same time suppressed the phonemic alternation  $i u > a$  in „laryngeal“ surroundings, since the *new short* vowels  $i u$  (<  $\bar{i} \bar{u}$ ) were not phonemically affected by  $\text{'}$ ,  $h$ ,  $\text{'}$ ,  $h$ , ( $\dot{g}$ ,  $\dot{b}$ ), and  $\check{i} \check{u}$  instead of  $\check{a}$  became possible in every position. Therefore in motivated forms with  $i$ - ablaut, where  $i$  had been mechanically replaced by  $a$  in the neighbourhood of „laryngeals“,  $i$  could be restituted, e.g. in class IV: *iuf'ilu* instead of *\*iuf'alu*<sup>7</sup> on the model of *qatala* : *iūqtilu* = *fa'ala* : *iuf'ilu*, whereas in the basic class I the vowel  $a$  was preserved (*iaf'alu*) because of the lack of a pertinent proportion. In order to undergo structural changes forms must be structurally subordinate to another set of forms constituting the 1<sup>st</sup> and the 3<sup>rd</sup> (or the 1<sup>st</sup> and the 2<sup>nd</sup>) member of the morphological proportion.

§ 19. Both in the qualitative alternation ( $i u > a$ ;  $u > i$ ) and in the quantitative alternation ( $\check{a} \check{i} \check{u} > \bar{a} \bar{i} \bar{u}$ ) the fact of neutralization of vocalic timbre or quantity entailed a phonemic ambiguity of the respective „archiphonemes“ and the possibility of the double interpretation of the forms of a derivational or inflectional series (cf. § 2—3). Morphological relations of such forms to basic forms were an indispensable prerequisite for creating such ambiguity. But at the same time the choice was determined by the law of *polarization*, i.e. of the maximum distance between the basic and the founded form. If e.g. in the basic series  $a$  before „laryngeal“ of certain forms corresponded to  $i u$  before „non-laryngeal“ of other forms, then in the respective derivatives  $a$  was interpreted as non  $-i -u$ , i.e. as  $a$ , thus becoming the starting-point of a productive  $a$ - ablaut. Hence the replacement of  $i u$  by  $a$  in the founded forms. This does not mean that the derivatives with  $i u$  were totally swamped out by the new form with  $a$ . The replacement of  $i u$  was not a phonetic law, but a productive morphological innovation. Therefore the old forms could well be preserved, beside the new ones, with a secondary, context-conditioned meaning.

<sup>7</sup> *fa'ala* instead of *qatala* stands for verbal roots with  $R_2$  or/and  $R_3$  = „laryngeal“.

§ 20. To take an example of such a split let us assume that the paradigm of the basic form contains both consonantal and vocalic endings, like

or:	↓	basic form:	<i>qatalu</i> (masc.) / <i>qataltu</i> (fem.)	— adj.
	↓	derivative:	<i>qatalu</i>	— (abstract) noun
	↓	basic form:	<i>iaqtulūna</i> (masc.) / <i>iaqtulna</i> (fem.)	— verb
	↓	derivative:	<i>qutulū</i>	— (abstract) noun.

The appreciation of the short quantity of *a* of *qatalu*, of *u* of *iaqtulna* is imposed by the other forms of the respective paradigm (*qatalu*, *iaqtulūna*), but in the derivative the alternative interpretation is possible. Both interpretations are respected in case of a morphological and semantic (structural and functional) *split*, e.g. *qatalu* adj. : *qatālu* (abstract) noun, or *qutulū* infinitive : *qutulū* (deverbative) abstract noun.

In order to understand its mechanism we must have recourse to certain hierarchical criteria concerning both form (or structure) and function (or value). The example of *qatalu* is apt to illustrate the difference both between primary and secondary function and between primary and secondary form<sup>8</sup>. As regards *qatal* it has the value of a verbal adj., but like every adj. it may under certain conditions be used as (abstract) noun. The latter function is secondary, the former (as adj.) primary, such a hierarchy being in agreement with the *ranges* of the two functions. Whereas the adjective value is proper to the whole paradigm *qatalu*, *qataltu*, *qatalū(na)*, *qatalātu* etc., the (abstract) noun is represented only by a part of the paradigm, either by the masc. or the fem. — Again, the choice between the short and the long vowel is that between primary and secondary form (or structure). The range of the short vowel in the paradigm of *qatalu* comprises open syllables and closed syllables (with the „archiphoneme“ \**ā*), whereas the long vowel is potentially existent only in the closed syllables containing the „archiphoneme“ \**ā̄*, where *ā̄* may be interpreted as an abbreviation of *ā*.

The same reasoning may be applied to *qutul*: primary function (inf.) with primary form (short vowel), secondary function (deverbative abstract noun) with secondary form (long vowel). The result is therefore a morphological split resulting in an association of the primary function (the „value“) with the primary form or structure, versus secondary function + secondary form<sup>9</sup>.

<sup>8</sup> The terms *primary* and *secondary* refer to the *synchronic* hierarchy of functions, although this hierarchy may coincide with their relative chronology. As a matter of fact the morphological type *qatal* is originally an adj. cf. *infra* § 42. So is probably the inf. *qutul* (deverbative adj. > deverb. abstract > inf.).

<sup>9</sup> Cf. *Extrapolation d'une loi linguistique* BSL 63, p. 1—12, where other examples of this law are discussed.

§ 21. As a rule the lengthened degree appears after  $R_2$ . The only important exceptions to be attributed to Protosem. are the part. *qātil* and the stem *qātil* of the 3<sup>rd</sup> verbal class of Ar. Within the above morphophonemic scheme it could be explained only by admitting a prototype *\*qatilu*, fem. *\*qatlatu* whose *a* in closed syllable could have been interpreted as a shortened  $\tilde{a}$  and then introduced into the masc. form: *qātilu*, fem. *qātil(a)tu* (for *\*qatlatu*). There are perhaps some traces of similar syncope indirectly attested in Ar. *ḥamsu* 'five', *ḥamsatu*, probably for *\*ḥamisu*, *ḥamsatu*, cf. Hebr. *ḥameš*, *ḥamiššā* and Akk. *ḥamiltu* for *ḥamištu*; perhaps also Hebr. *mēlēch* 'king', fem. *malkā* < *\*maliku*, *\*malkatu* (Ar. *maliku*, *malikatu*); Ar. 'ašara : 'ašrata (chap. VII § 13). Such an explanation would suppose a Sem. syncope of the vowel *i* of *\*gat(i)latu* and therefore a very old differentiation between *\*qatilu/qatlatu* and *qātilu/qatlatu*. Deverbative adjectives derived from transitive verbs are often semantically ambiguous: they may have the meaning of either a passive (preterite) participle or of an active (present) participle, cf. the fate of the I. E. verbal adj. in *-nt-*, as in Lat. *edent-* (active) versus Hittite *-nt-*, as in *adant-* (pass.). It is the *pass.* (*pret.*) meaning which represents the *primary* semantic function of such forms, the passive standing in opposition with the transitive nature of the basic verb (e.g. *amātus* : *amat*), whereas in *amāns* : *amat* the difference of voice is obliterated. Just as in the example of the preceding paragraph the primary function is associated with the primary form (short vocalism for passive meaning), the secondary function with the secondary form (long vocalism for active meaning). But the opposition *qātil* : *qatlat* is unknown in the historical languages except in the construct case of Akk. where it is due to a relatively late syncope (chap. VII § 21).

§ 22. Established as a *morphological implement* lengthening penetrates also into productive suffixes. The *morphological cut* between the root and the suffix permits to treat the latter as a semi-autonomous morpheme liable to undergo modifications originally proper only to the root. Such phenomena are customary in I. E. In Sem. morphological lengthening of the suffixal vowel seems to occur in the following cases:

-*atu-* : -*ātu* (abstract which, via collective value, becomes the pl. of inanimate or impersonal gender, cf. chapter VIII § 15);

-*ā* (< -*aiṇu* or -*ayyu*) : -*ā'* (< -*āiṇu* or -*āyyu*), suffixes of abstracts which owing to secondary oppositions become exponents of fem. gender (chapter VI § 7); originally -*ā* is an adjective suffix, -*ā'* its secondary lengthening.

There are, moreover, lengthened forms of *nasal* suffixes: -*ān* besides -*an*, and -*ām* besides -*am*, all of them, except -*ān*, archaisms whose functions are difficult to establish. The derivatives in -*ān* and -*ām* were probably abstracts since they have no special fem. form when used as attributes. If such be the case, the morphological role of the lengthening has been

similar to that of the suffix *-at*, viz. reinforcement of the substantive value of the form. Cf. Ar. *raǧulu<sup>n</sup> zimḥannu<sup>n</sup>* 'bad man' or *raǧulu<sup>n</sup> bilagnu<sup>n</sup>* 'eloquent man, mediator' besides r. *zimḥanatu<sup>n</sup>, bilagnatu<sup>n</sup>*. For some examples of *-ān, -ān* see Barth *Nominalbildung* p. 343 ff., 349 ff., 351.

§ 23. The ablaut vowel : zero, probably the oldest one, must be finally mentioned. The Sem. ablaut is an essential ingredient of the morphological structure of the verb, hence also, via derivation, of the noun. To explain the morphological role of the ablaut we must, however, keep in mind the structure of the Sem. root, in the first instance of the *verbal* root. The fundamental form of the Sem. conjugation, the so-called „imperfect(ive)“ *iaqtul(u)* shows a characteristic vowel after  $R_2$  which is unpredictable, i.e. independent of any grammatical rule, hence basic. Therefore the verbal root is not a consonantal skeleton (*q-t-l*), but contains an essential vocalic component (*u* of *qtul*). To look for a *morphological* function of the root vowel (= vowel of  $R_2$ ) in the *primary* verb must be considered a misunderstanding. Since the vowel in question can express fientive (trans. or intrans.) or stative function only by *opposition*, the only pertinent proof of the correctness of such a view would be to demonstrate the existence of primary verbs with *identical* root but different root vowels, e.g. *iaqtulu* : *iaqtilu* within the same Sem. language, showing the alleged semantic difference. A relation like Ar. *iaqtilu (iaqtulu) : iaqtalu* (Sem. *\*iaqtalu*) is not one between two *primary* verbs, since *iaqtalu* (intrans.) is a *derivative* from *iaqtilu (iaqtulu)* which is structurally neuter (trans. or intrans.). On the other hand it must be kept in mind that there are verbs of the primary structure *iaqtilu, iaqtulu* which must be derivatives, cf. *ialsunu* 'seize one's tongue' < *lisānu* 'tongue' or *iaktifu* 'tap on the shoulder' from *katifu* 'shoulder'.

The association of a given root-vocalism with a certain fundamental meaning (like trans. intrans. stative) *can be rightfully established only for derived verb-forms*, whether deverbative or denominative.

To look for a constant association between the vocalism of  $R_2$  and the fundamental meaning of *non-motivated* (primary) verbs is a methodological derailment tantamount to the old theory of „Lautsymbolik“.

§ 24. Another important observation is the priority of *qtul* versus deverbative forms like *qul* etc. with *u*-zero (and in general vowel-zero) as against zero-vowel of the personal verb (imperfective). To put it shortly the minimal forms of triconsonantal verbal roots contain a short vowel between  $R_2$  and  $R_3$  or between  $R_1$  and  $R_2$ , the form  $R_1R_2a^xR_3$  being basic, and  $R_1a^xR_2R_3$  derivative. In primary verbs the basic forms appear in the imperat. of class I: Ar. *(i)qtal, (i)qtīl, (u)qtul*<sup>10</sup>; Hebr. *qtol, qtal, qtel*,

<sup>10</sup> Eth. has *qetel* < *qutul*.

hence 2<sup>nd</sup> p. fem. *q̄tōlī*, 2<sup>nd</sup> p. pl. *q̄tōlū* etc. besides \**q̄utlī*, \**q̄utlū*, cf. *m̄lōchī* 'reign!', *q̄sōmā* 'practise divination!' as against the qere-forms *mālchī*, *q̄āsmī*. The old forms *q̄tōlī*, *q̄tōlū* are also used *in pausa*.

§ 25. The old identity of the vowels of  $R_1$  and  $R_2$  is to be accounted for by the relation between  $R_1R_2a^\times R_3$  (basic form of the verbal root) and  $R_1a^\times R_2R_3$  (derived form of the verbal root), a relation which must have imposed the vocalism of  $R_2$  on the initial consonant of the derivative. Let us suppose that originally the vocalism of  $R_1$  ( $a$ ,  $i$  or  $u$ ) was independent of that of  $R_2$  ( $a$ ,  $i$  or  $u$ ). The possible relations would have been:

basic form	derived form	basic form	derived form
$R_1R_2aR_3 \longrightarrow$	$R_1aR_2R_3$	$R_1R_2iR_3 \longrightarrow$	$R_1aR_2R_3$
"	$R_1iR_2R_3$	"	$R_1iR_2R_3$
"	$R_1uR_2R_3$	"	$R_1uR_2R_3$
basic form	derived form		
$R_1R_2uR_3 \longrightarrow$	$R_1aR_2R_3$		
"	$R_1iR_2R_3$		
"	$R_1uR_2R_3$		

On the model of  $R_1R_2aR_3 \rightarrow R_1aR_2R_3$ ;  $R_1R_2iR_3 \rightarrow R_1iR_2R_3$ ;  $R_1R_2uR_3 \rightarrow R_1uR_2R_3$ , where the difference between the two forms of the root consists in a *simple metathesis*, we get an analogous relation in the other cases, i.e.  $R_1R_2aR_3 \rightarrow R_1aR_2R_3$  (instead of  $R_1iR_2R_3$  and  $R_1uR_2R_3$ );  $R_1R_2iR_3 \rightarrow R_1iR_2R_3$  (for  $R_1aR_2R_3$  and  $R_1uR_2R_3$ );  $R_1R_2uR_3 \rightarrow R_1uR_2R_3$  (instead of  $R_1aR_2R_3$  and  $R_1iR_2R_3$ ).

The inference is that in the fundamental form of the conjugation (*ia*)*q̄ta<sup>u</sup>l(u)* the syncopated vowel of *q̄* has been also  $a^\times$ . As regards the conditions of *internal* syncope it finds an interesting parallel in the relation *q̄a<sup>u</sup>lat(u)* : *q̄a<sup>u</sup>tal(u)*, cf. the plurals *q̄atal(u)* < *q̄atlat(u)*, *q̄ital(u)* < *q̄itlat(u)*, *q̄utal(u)* < *q̄utlat(u)*. Cf. also -*tu* besides -*atu*, -*nu* besides -*anu*. It seems that in trisyllabic (or quadrisyllabic) stems an internal vowel has been syncopated in Sem. The precise conditions are, at least provisionally, unknown owing to our ignorance of Sem. accentuation.

§ 26. Since the derivation of triconsonantal verbal roots (from biconsonantal roots) by means of prefixation was in Sem. a common phenomenon, the fact that  $R_1$  has no autonomous vocalism suggests the inference that derivational prefixes adopted the vocalism of the (biconsonantal) root. This must have been also originally the case of the inflectional prefixes whatever their origin.

The lack of an original *autonomous* vocalism of prefixes like *m-*, *t-*, *ʔ-*, *ḡ-*, is an outstanding feature of Sem. It is, however, only a corollary of the relation *q̄tul* (> *q̄utul*) > *q̄utl* as analysed above. Whatever the original timbre of the prefixal vowel, it must have been levelled by the proportion

*qtul* (> *qutul*) : *qutl* = *qtil* (> *qitil*) : *qitl* = *qtal* (> *qatal*) : *qatl*. Let us assume that  $R_1$  of a trilateral root like *q-t-l* is etymologically a prefix, e.g. *š-kun* besides *kun*, cf. Ar. *sakana*, *kāna*. Then the vocalisation of the prefix will be in agreement with the fundamental vowel of the root (*škun* > *šukun*). The extension of the prefixation of *š* to trilateral roots will take place according to the proportion *kun* : *šukun* = *q(u)tul* : *šugtul*, hence also the types *šigtul*, *šagtul*, and similarly for other prefixes.

§ 27. The forms *qatal*, *qitil*, *qutul* are also used as nominal derivatives (\*adjective, verbal noun, infinit. of the personal verb). In these forms the vowel of  $R_1$  is not syncopated<sup>11</sup>. The difference of treatment between *qtul* (imperat.) and *qutul* (verbal noun) makes us raise the question whether the syncope of the vowel in *qtul* was phonetic or not. Since from the functional point of view the imperat. is subordinate to the indic., we could consider *qtul* as being simply the naked stem of the indic. (*ia-qtul-u*). The deuterotonic<sup>12</sup> form of the root would be *qutul* as in the verbal noun<sup>13</sup>, syncope taking originally place after a prefix, then, by analogy, also in the imperat. Whether the forms of the imperat. pointing to \**qut(u)lī*, \**qut(u)lū*, \**qut(u)lā*, attested by Akk. and Hebr., are innovations or archaisms, must remain a moot question.

§ 28. Once transformed into apophonic procedures the relations  $a^x$ : zero;  $i : u : a$ ;  $u : i$ ;  $\tilde{a}^x : \bar{a}^x$  are treated like morphemes, i.e. they can be reversed, cumulated etc. E.g. the relation between Ar. *raḡulu*<sup>n</sup> and the pl. *riḡālu*<sup>n</sup> represents a superposition of  $R_1a > R_1i$  upon  $R_2u > R_2\tilde{a} > R_2\bar{a}$ . Taking into account the variety of possible apophonic relations we must limit ourselves to pertinent morphological oppositions between basic and derived words, and to structural oppositions between two inflectional forms of a word.

§ 29. The primary verb is to be considered as the original source of apophony simply because the latter is firmly established in its inflection. The variability of the root-vocalism in conjugation implies the choice (selection) of a definite degree in the corresponding derivative. On the other hand, nominal inflection shows no trace of apophony, the so-called 'broken' or internal plurals being a dialectal and relatively recent innovation of South Sem. Therefore the study of apophony must start with

<sup>11</sup> The syncope in the Hebr. infinit. *qtol* is probably recent being due to the construct, i.e. proclitic, use of the form.

<sup>12</sup> Accented on the second syllable of the hypothetical „base“, i.e. *qutūl*, as against the prototonic form *qutl* (< *qūtūl*).

<sup>13</sup> The vocalism of *qutul* is determined by the verb *iaqtulu* and by the prototonic form *qutl*. Since the shift *qtul* > *qutl* presupposes the transformational chain *qtul* > \**qutūl* > (\**qūtūl* >) *qutl*, the form underlying the verbal root *qtul* will be \**qutūl* whatever the original vocalization of  $R_1$  may have been. The verbal noun *qutul* is therefore a simple root noun („nom-racine“).

the analysis of the mechanism and functioning in the conjugation of the *primary verb*.

§ 30. Although the alternation  $i u > a$  lost its *phonemic* status long before the literary period of Sem., its *morphological* consequences, the ablaut  $i u > a$ , plays an important role in the grammar of the historical languages. In the first place the inflectional prefixes or the root of the verb must have undergone a change if  $R_1$  or  $R_3$  was a „laryngeal“. We do not know the *original* timbres of the prefixal vowels of  $\dot{i}$ -,  $t$ -,  $'$ -,  $n$ - of the different persons and numbers of the „imperfective“. Etymologically these elements may well go back to pronouns, i.e. to independent forms. But the fact that at a given moment these timbres were levelled to  $a$  under the influence of  $R_1$  = „laryngeal“ plus the fact that the prefixes were subordinate to the root, must have entailed the generalization of  $a$  as the characteristic vowel of the inflectional prefixes.

The original timbre ( $i$  or  $u$ ) could have been preserved only in verbal forms with secondary semantic functions:

- ↓ I  $\dot{i}aqtal$ ,  $\dot{i}aqtil$ ,  $\dot{i}agtul$ ;  $\dot{i}af'al$ ,  $\dot{i}af'il$ ,  $\dot{i}af'ul$  (primary function)  
 ↓ II  $\dot{i}axqtal$ ,  $\dot{i}axqtil$ ,  $\dot{i}axqtul$ ;  $\dot{i}axf'al$ ,  $\dot{i}axf'il$ ,  $\dot{i}axf'ul$  (secondary function)  
 In the case of  $R_{2,3}$  = „laryngeal“ this relation shifted to:  
 ↓ I  $\dot{i}aqtal$ ,  $\dot{i}aqtil$ ,  $\dot{i}agtul$ ;  $\dot{i}af'al$   
 ↓ II  $\dot{i}axqtal$ ;  $\dot{i}axf'al$ .

II being subordinate to I, the timbre  $a$  was generalized in the verbal root of II. The timbre of the prefix, originally depending on the trans. or intrans. *use* of the root, was henceforth governed by a special vocalism of the root ( $u i$  of the prefix implied by the  $a$  of the root). This is the so-called Ungnad-Barth law.

§ 31. The subsequent change  $u > i$  before  $R_1 = \dot{i}$  brought  $\dot{i}a$  :  $\dot{i}i$ -<sup>14</sup> into direct opposition since  $u > i$  entailed  $a > i$  ( $u > i$  being equal to  $u > a > i$ , cf. § 17).

The timbre  $u$  is preserved in verbal forms with secondary function. Hence:

- ↓ I  $\dot{i}aqtal$ ,  $\dot{i}aqtil$ ,  $\dot{i}agtul$ ;  $\dot{i}af'al$  (primary function: transitive or intrans. verb), e.g. „I kill“  
 II  $\dot{i}iqtal$ ,  $\dot{i}if'al$  (secondary function of I: intrans. fientive or stative verb), e.g. „I am killed“  
 ↓ III  $\dot{i}uqtal$ ,  $\dot{i}uf'al$  (secondary function of II: fientive-passive), e.g. „I am being killed“

<sup>14</sup>  $\dot{i}a$ - being either  $\dot{i}u$ - or  $\dot{i}i$ - depending on the verb. *Mutatis mutandis* the same relations hold true for the other conjugational prefixes.



This functional hierarchy is in agreement with the order of the decreasing phonemic ranges of *ia*-, *ii*-, *iu*-.

The Barth-Ugnad law concerning the distribution of *ia*-, *ii*-, *iu*-, viz. *ia*- in the (trans.) stems *iaqtulu*, *iaqtulu*, and *ii*-, *iu*- in the intrans.-stative stems *iiqtalu*, *iuqtalu*, proves therefore a corollary of the Sem. apophony *i, u* > *a*, and *u* > *i*.

The distinction *iaqtulu* : *iiqtalu* is well preserved in the Hebr. verbs with  $R_1$  = „laryngeal“, e.g. *ia'moḏ* : *iḡhezaq*, with  $R_2 = R_3$ , e.g. *iāšōḇ* : *iḡqal*, and with  $R_1 = \text{u}$ , e.g. *iḡšēḇ* : *iḡraš*; cf. also *iāqūm* : *iḡḇōš* etc. The Barth-Ugnad law seems also to be confirmed by Ugar., Gordon *Manual* p. 56—57.

§ 32. The prefixes with *i*-vowel have been totally swamped out in Akk. and replaced by *ia*-, *ta*- etc., like in Ar. where, however, traces of the *i*-forms are attested in sporadical readings of the Koran, cf. Brockelmann *GVG* I p. 561.

Notice moreover that the Ar. rule prescribing the prothetic vowel *u* for *qtul*, but *i* both for *qtil* and *qtal* finds its explanation in the original distribution of the prefixal timbres:

*iaqtulu* : *uqtul*  
*iaqtulu* : *iqtil*  
*\*iiqtalu* : *iqtal*  
*iuqtalu* : *\*uqtal*

As long as *iuqtalu* existed as *intransitive* formation, the prothetic vowel of *qtal* could be either *i* or *u*. Since, however, the historical use of *iuqtalu* as passive form excludes the use of the imperative (*\*uqtal*), *i* remains as the only prothetic vowel for *qtal*. The distribution of the timbres of the prothetic vowel can be also explained as in § 17.

§ 33. In Ugar. the use of the *i*-coloured prefixes goes far beyond the original limits. In the first place verbs with  $R_2$  or/and  $R_3$  = „laryngeal“ have been assimilated to the intransitive type *iif'alu*, perfective *fa'ila*. E.g. *ilak* = 'il'aku 'I will send' („perf.“ *lik* corresponding to *\*la'aka*), *ibq'* = 'ibqa'u 'I will split', *ilḡm* = 'ilḡamu 'I will eat', *imḡs* = 'imḡaṣu 'I will smite', *ispa* (and *ispi*) = 'ispa'u 'I will eat', *iqra* = 'iqra'u 'I will glorify', *išlḡ* = 'išlaḡu 'I will send'. Notice that the expected *a* appears in all the other cases, thus *amlk* = 'amluku 'I will reign', *ahpkk* = 'ahpuku-ka 'I will overthrow thee', *amt* = 'amūtu 'I will die', *anḡn* = 'anūḡan 'I will relax', *atn* = 'a(n)tinu 'I will give', *ard* = 'aridu 'I will descend', 'šr = 'aširu 'I will sing', *ašk* = 'ašitu-ka 'I will put thee'.

In the second place *ii*- etc. penetrated into the verbal classes with *n*- and *t*- prefix; *iaqtatilu* > *iiqtatilu*, *ianqatilu* > *iinqatilu*, (*iastaqtilu* > *iistaqtilu*), Gordon *o. c.* p. 66, 227. This fact is easily explained by

the semantic affinity between these classes and the intransitive type *iqṭalu*.

In Hebr. the spread of *ii-* replacing *ia-* is partly phonetic, partly concomitant of the ousting of the root-vocalism *i, u* by *a* in intransitive verbs: *iqṭalu* for intrans. *iaqṭilu, iaqṭulu*.

§ 34. The divergency between the Ar. and the Ugar. and Hebr. developments may be explained by the difference of factors responsible for the respective changes, *semantic* in the former, *structural* in the latter case. On the one hand *ii-* was dominated by *ia-*, since *ia-* was proper both to trans. and intrans. verbs, *ii-* only to intrans. verbs. On the other hand, *within* the intrans. verbs the root-vowel *a* was independent of the phonemic surroundings in *iqṭalu, iif'alu*, but dependent on the „laryngeal“ in *iaf'alu* (hence in Ugar. the pressure exerted first on intrans., then also on trans. *iaf'alu*).

The form *iqṭalu* has a passive meaning in West Sem.; cf. the Romance passive *est amatus*, the successor of Lat. *amatur*.

§ 35.  $R_3 = i$  has played a decisive role in the formation of the derivative classes of the Sem. verb. E.g.

I *iaqṭalu, iaqṭilu, iaqṭulu*; with  $R_3 = i$ : *iaqṭai, iaqṭii, iaqṭii* (for *\*iaqṭui*)

II *qattal, qattil, qattul*; with  $R_3 = i$ : *qattai, qattii, qattii* (for *\*qattui*).

In verbs with  $R_3 = i$  the phonemic merger of *qattii* and *qattui* in II triggered the morphological replacement of *qattul* by *qattil*, hence also that of *qattal* by *qattil*, cf. above § 17 ( $u > i = u > a > i$ ).

Therefore the verbal stem of the class with geminated  $R_3$  will be *qattil*. Cf. Ar. *iaqṭattilu*, Hebr. *iaqṭattēl*, Akk. *uparris*. The same reasoning explains the vowel *i* of the causative or of the *n*-intransitive: Ar. *iaqṭilu*, Hebr. *iaqṭil*, Akk. *uṣapris*; Ar. *ianqatilu*, Hebr. *iaqqatēl*, Akk. *ipparis*.

In all Sem. languages the verbs with  $R_3 = u$  change  $R_3$  to  $i$  in the derived classes. But the historical interpretation of this merger must not be based on the fact that the derived classes have had the characteristic vowel *i*. On the contrary, it is the change  $ui > ii$  which is responsible for *i* becoming their characteristic vocalism.

§ 36. The apophony  $u > i$  in the derived classes entailed a split between the vowel *i* of the personal forms, and *u* of the corresponding nominal forms which maintained the vocalism *u* of the basic verb.

Cf. Akk. (Ass.):

		imperat.	infinit., verbal adj. and stative
class II ( <i>uparris</i> )	<i>parris</i>		<i>parrus</i>
class III ( <i>uṣapris</i> )	<i>ṣapris</i>		<i>ṣaprus</i>
class IV ( <i>ipparis</i> )	<i>napris</i>		<i>naprus</i>

The differentiation  $i : u$  was then generalized independently of the fundamental root-vowel (whether  $u$ ,  $i$  or  $a$ ). The Ar. infinitives *taqattulu* (class V), *taqātulu* (class VI) are a trace of this apophony.

As regards the passive of the derived classes, it follows the model of the basic class in adopting the vowel  $a$ , e.g. (*iu*)*qattil(u)* : (*iu*)*qattal(u)* like (*ia*)*qtil(u)* : (*iu*)*qtal(u)*.

§ 37. To sum up the changes triggered by  $R_1$  = laryngeal or  $i$  have been the cause of the differentiation of the conjugational prefixes, whereas  $R_3$  ( $R_2$ ) = laryngeal or  $i$  are responsible for the apophony within the verbal root.

The prefixes of the derived classes have the vowel  $u$  or  $a$  with the following distribution: the intensive (with geminated  $R_2$ ) and the causative (with  $\dot{s}$ -,  $h$ - or  $\text{'}$ - prefix) have *iu*-, the intrans. classes with  $n$ - or  $t$ -prefix have *ia*-. In the basic class the distribution is: (trans.) active *iaqti/ulu* → intrans.-pass. *iiqtalu*, *iūqtalu*. In a derived form like the intens. the distinction *iiqtalu* : *iūqtalu* was formally neutralized in favour of the marked timbre  $u$  (*iūqattalu*). But *iiqtalu* : *iūqattalu* in the pass. entails *iūqattilu* instead of *\*iaqattilu* in the act. since  $i > u$  (in the pass.) implies  $a > u$  (§ 17).

The prefix *iu*- of the causative is to be explained in the same way. Ugar. *iāqattilu*, *iāšaqtilu* as against the joined testimony of Ar. and Akk. (*umahḥir*, *uṣmahḥir*) can scarcely be considered an archaism. Cf. Ugar. *'abaqqittu* 'I desire' : Hebr. *iḇaqqeš* 'he looks for'; Ugar. *'aša'ribu* 'I make enter' : Hebr. *\*a'reḇ*.

The fact that quadriliteral verbs have in Ar. the form *iūqamṭiru* etc. suggests that they are treated like derivatives from trilateral stems enlarged or reduplicated ( $R_1$ - $R_2R_2$ - $R_3R_4$ - $R_1R_2$ - $R_3$ ).

On the other hand *iānqatilu* and *iātqatilu* (*iaqtatilu*) being fundamentally intrans. have originally no pass. and maintain the vocalism  $a$  of the prefix.

§ 38. In a similar way the root-vowel of Ar. *taqattala*, *taqātala* (imperf. *iataqattalu*, *iataqātalu*) may be accounted for. The derivation is:

<i>iūqattilu</i>	<i>iūqattalu</i>		<i>iūqātilu</i>	<i>iūqātalu</i>
		and		
↓ <i>*iātaqattilu</i>	<i>iūtaqattalu</i>		<i>*iātaqātilu</i>	<i>iūtaqātalu</i>

The vowel  $a$  of *iūqattalu* (*iūqātalu*), corresponding to the  $i$  of the act., represents an ablaut  $i > a$  characterizing the pass. of the basic form (*iūqattilu*, *iūqātilu*). This ablaut has a zero-value with relation to the pass. of the *derived* form and is subtracted just as e.g. the characteristic affix of the present is subtracted when forming the aorist or the perfect in IE. The underlying opposition of stems in the pass. is therefore *qattil* : *taqattal*

(*qātil* : *taqātal*). It replaces the previous opposition *qattil* : \**taqattil* (*qātil* : \**taqātil*) in the act., hence the historical forms *ḵataqattalu* (*ḵataqā-talu*) : pass. *ḵutaqattalu* (*ḵutaqātalū*). In Hebr. the vocalization of *hiḥpa'el* seems to have been *a*, cf. *hiḥpa'āl* (in *pausa*). The vowel *e* is probably to be ascribed to the influence of *pi'el*.

§ 39. The fate of the *m*-prefix of the part. is closely connected with the above evolution of the verbal classes. The participles of the derived classes are adjectivized abstract nouns with the prefix *m*- (for its affinity with the nominal prefixes *ma*-, *-mi*- cf. chapter VI § 50). The vowel of the prefix is always *u*, this being borne out both by Ar. and by Akk.: Ar. *muqattilu*, *muqātilu*, *muqtīlu*, *munqatilu*, *muqtatilu* etc. The opposition *muqattalu* : *muqattilu*, *muqtalu* : *muqtīlu*, where the *u* of *mu*- is in direct agreement with the vowel of the personal prefixes, provides a pattern : active participles have the root-vocalism *i* (as against the *a* of the pass.), but do not differ in the prefix (*mu*-), which is neuter. The part. of the *n*- and *t*-stems corresponding to the personal forms *ḵanqatilu*, *ḵaqtatilu*, may well have been originally \**manqatilu* and \**magtatilu*, respectively. But once, owing to the semantic change of the *n*- and the *t*-forms of some verbs and to certain special uses of the pass., the pass. forms *ḵunqatalu*, *ḵuqtatalu* with the corresponding part. *munqatalu*, *muqtatalu* became necessary, they gave rise to the following opposition:

↓ *ḵanqatilu* pass. *ḵunqatalu*  
 ↓ \**manqatilu* pass. *munqatalu*

The *u* of *ḵunqatalu* was interpreted as the ablaut of the basic *a* of *ḵanqatilu*, hence by polarization the value *u* in *munqatalu* and its introduction into the part. \**manqatilu* (> *munqatilu*).

§ 40. In Bab. the *u*-timbre of the prefix of *uparris*, *uṣapris* (corresponding to Ar. *ḵuqattilu*, *ḵuqtīlu*) has replaced the original vowel of *R<sub>1</sub>* in forms deprived of prefix, in the imper. and in the so-called „stative“ („permansive“):

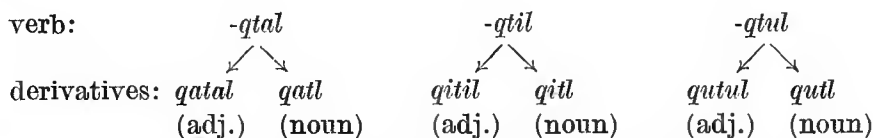
Ass.	pret.	<i>uparris</i>	imperat.	<i>parris</i>	stative	<i>parrus</i>
Bab.	„	<i>uparris</i>	„	<i>purris</i>	„	<i>purrus</i>
Ass.	„	<i>uṣapris</i>	„	<i>ṣapris</i>	„	<i>ṣaprus</i>
Bab.	„	<i>uṣapris</i>	„	<i>ṣupris</i>	„	<i>ṣuprus</i>

But Ar. imperat. *qattil*, *'aqtil*; *taqattul*, *taqātul* prove that in this case the Ass. forms are older.

§ 41. Deverbative nouns and denominative verbs will be treated more in detail in chapter VI. Some verbal adjectives and nouns, however, which are closely bound up with the development of the Sem. conjugation, must be briefly mentioned in this place.

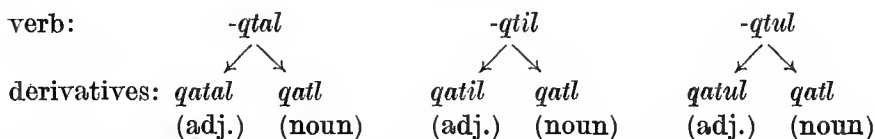
We have seen that the forms *qatal*, *qitil*, *qutul* and *qatl*, *qitl*, *qutl* corresponded to the verbal roots *-qtal*, *-qtil*, *-qtul* respectively:

## I



According to the rules of vowel-gradation established in § 30 the merger *i, u > a* after  $R_1$  = „laryngeal“ must have triggered the following change:

## II



with the old forms *qitil*, *qitl*, *qutul*, *qutl* maintained in *secondary* functions. Before the change I > II *qatl*, *qitl*, *qutl* stood in *direct* semantic relation (primary function) to the basic verb, in *indirect* relation (secondary function) to the verbal adj. *qatal*, *qitil*, *qutul*. After the change in question they were restricted to this secondary function of abstracts referring to the verbal adj. *qatal*, *qatil*, *qatul*, whereas the primary function was taken over by *qatl*. As regards the old forms *qitil*, *qutul*, they were relegated to the conjugational system of the basic verbs as *infinitives*. For the semantic connection between adj. and verbal noun (or infinit.), cf. *infra* chap. VI § 1.

§ 42. The subsequent merger of *u* and *i* before  $R_3 = \dot{i}$  entailed a change of the relation between *qatal*, *qatil*, *qatul* and the basic verb. It is the form *qatil* which became the general representant of the verbal adj. (*a > i* being a consequence of *u > i*, cf. § 17). Both *qatal* and *qatul* were restricted to secondary functions. Taking into account the *later functions* of the three forms in the historical languages, we may define:

the type *qatil* as denoting the result of a past intrans. or trans. action (past part.)

„ „ *qatal* as denoting the author of a trans. action.

„ „ *qatul* as denoting a permanent state or quality (verbal adj.)

Between *qatil* and *qatul* the difference is approximately that between a participle and the corresponding verbal adj.

§ 43. Two other important deverbatives must be mentioned. The relations *iḡqtilu* : *qatal*, *iḡqutlu* : *qatul* are responsible for the creation of the forms *qital* and *qutal*:

$$\begin{aligned} \dot{\imath}aqtilu/iqtil : qatal &= \dot{\imath}iqталu/iqтал : qital \\ \dot{\imath}aqtululu/ugtul : qatal &= \dot{\imath}uqталu/*ugtал : qutal \end{aligned}$$

Hence  $\dot{\imath}iqталu \rightarrow qital$ ;  $\dot{\imath}uqталu \rightarrow qutal$ .

But the forms *qital*, *qutal* can be also of *denominative* origin. A morphological inversion of the opposition *qatal* : *qatl*; *qitil* : *qitl*; *qutul* : *qutl* (adj.: subst.) to

↓	<i>qatal</i>	<i>qitl</i>	<i>qutl</i>
↓	<i>qatal</i>	<i>qitil</i>	<i>qutul</i>

must after the change  $i, u > a$ , if  $R_3 =$  „laryngeal“, shift to

↓	<i>qatl</i>	<i>qitl</i>	<i>qutl</i>
↓	<i>qatal</i>	<i>qital</i>	<i>qutal</i>

Both in the deverbative and in the denominative derivation *qital* and *qutal* play a considerable role.

§ 44. The existence of the infinitive *qatal* in the intrans. conjugation  $\dot{\imath}iqталu$  (in Ar.) is in connection with the replacement of the prefixal vowel *i* by *a* ( $\dot{\imath}iqталu > \dot{\imath}aqталu$ ).

Hence the ambiguous position of *qatal*: originally verbal adj. in the trans. conj., then also verbal abstract in the conj.  $\dot{\imath}aqталu$ .

§ 45. From the basic forms *qatal*, *qatil*, *qatul*, *qital*, *qutal*, *qutul* second ary nouns with the *lengthening of the vowel* of  $R_2$  may be derived. The latter are to be considered as forms enlarged by the addition of a positive prosodic feature (length).

### Chapter III. THE AKK. VERBAL SYSTEM

§ 1. The difference between the East Sem. (Akkadian) and the West Sem. verbal system seems at first blush considerable. Certain tenets and universals of general linguistics permit, however, to reconcile most of the apparent discrepancies. Both groups have partly innovated, partly kept the Protosem. heritage. Innovations consist mostly in the *extension* of the use of certain inherited morphological categories at the expense of others which have gradually become obsolete or have been restricted to secondary functions.

The inherited categories of the basic<sup>1</sup> verb are:

1) The „imperfect(ive)“<sup>2</sup> *iaqtulu*, *iaqtilu*, *iaf'alu* plus the corresponding subjunctive and imperat. (and the enlarged forms in *-an*, *-anna*).

2) The „apocopated“ forms *iaqtul*, *iaqtil*, *iaf'al*.

3) The corresponding forms with *ii-*, *iu-*prefixes and the root-vowel *a* (plus moods).

4) The „stative“ *qatil* (*qatul*) and the participle *qātilu*.

5) A form corresponding to the Akk. present (*iparras*, *iparris*, *iparrus*) attested in all three branches of Sem.: Akk. Eth. and North Sem. (*at least* in the el-'Amarna glosses).

As regards the functions: 1) was the Sem. form expressing the grammatical present and (contextually) the future; 2) was the oldest Sem. form expressing the past tense; 3) was the oldest form with intrans.-pass. value opposed to 1) and 2) of trans. verbs; 4) (*qatil*) expressed a present state resulting from a past action: the form was „active“ if referring to an intrans. verb (cf. Engl. *gone*), „passive“ if referring to a trans. verb (cf. Engl. *done*); 5) was in actuality not a basic, but a derived form, as shown by the gemination of R<sub>2</sub> — its original value, before it ousted the

<sup>1</sup> *Basic* as against the *derived* verbal classes.

<sup>2</sup> „Imperf.“ and „perf.“ are here used as traditional terms denoting only the structure, not the function, of *iaqtulu* etc., and *qatala* etc., respectively. Therefore they do not refer to anything like the classical aspects, as established for Greek or Slavic, which may be neatly defined by pertinent semantic oppositions including not only the indic. of the past tense, but also moods like the (subj. opt.) imperat. and even the infinit. and the participles.

old present-future in Akk., had been probably iterative-durative, cf. *infra* (§ 8) for the etymology and Engl. (*he writes*): *he is writing*.

§ 2. The chief innovations of Akk. are:

The replacement of 1) by 5) entailing the simultaneous lowering of the status of 1) which is preserved only in secondary syntactical functions<sup>3</sup>; the replacement of 3) by a *n-* or *t-*derivative; and finally the creation of a *t*-perfect<sup>4</sup>.

The chief West Sem. innovations concern the gradual ousting of the old past 2) which becomes context-conditioned and may acquire a modal value; the transformation of the old „stative“ into the West Sem. perfect, both trans. and intrans., taking over most of the semantic area of 2); the loss of the old iterative-durative 5).

Two major tendencies dominate the development of the grammatical tenses in Sem.: 1) the competition of the old present with an iterative-durative derivative (Akk. *\*iprusu* → *iparras*); 2) the rise of a *perfect*, i.e. of a new form denoting a state (resulting from previous action) and competing with the old pret. (West Sem. *ṣaqtul* → *qatala*; Akk. *iprus* → *iptaras*).

These tendencies are universal, occurring over and again in the history of any language.

§ 3. Akk. and Ar. are our chief sources for the reconstruction of verbal roots which — as already mentioned in chap. II § 23 — comprise a fundamental and independent vocalism of R<sub>2</sub>. In Hebr. the vowels *u* and *i* (also *a*) are in a high degree predictable being conditioned by the structure of the verbal root and/or by the trans. and intrans. nature of the verb. In Eth. important distinctions have been swamped out by the merger of *i* and *u* (> *e*). The Ar. „imperf.“ and the Akk. pret. as a rule agree in their fundamental vocalism (though exceptions do occur):

root-vowel *u*: Ar. *'aḡara* 'hire': Akk. *agāru*; *'aḡada* 'take': *aḡāzu*; *'akala* 'eat': *akālu*; *'amara* 'order': *amāru*; *barama* 'turn, twist': *barāmu*; *ḡalla* 'perforate': *ḡalālu*; *ḡakara* 'mention': *zakāru*; *ṭaqala* 'weigh': *ṣaqālu*; *raḡama* 'revile': *ragāmu*; *rakasa* 'bind': *rakāsu*; *saṭara* 'write': *ṣaṭāru*; *sakana* 'dwell': *ṣakānu* 'put'; *salla* 'draw': *ṣalālu* 'capture'; *ṭabāḡa* 'cook': *ṭabāḡu* 'slaughter'; *ṭarada* 'chase': *ṭarādu*; *ḡalla* 'bind': *alālu*(?); *ḡaraba* 'depart': *erēbu* 'enter'; *faraṣa* 'cut, tear apart': *parāṣu* 'lie'; *kassa* 'pound': *kasāsu*; *katama* 'hide': *katāmu* 'cover'; *laḡata* 'pick up, collect': *laḡātu* 'seize'; *maḡara* 'be thirsty': *maḡāru* 'desire'; *maḡḡa* 'stretch': *maḡādu* 'measure'; *naṣara* 'detach, tear away': *naṣāru* 'diminish'; *naḡara* 'look

<sup>3</sup> Cf. *L'apophonie en sémitique* p. 52, 60. It is misleading to call Akk. *iprusu* etc. a „subjunctive“.

<sup>4</sup> Just as in many other languages the creations of a new passive and of a new perfect are in close connection, cf. Engl. *he is (being) killed* and *he is gone*.



out' : *našāru*; *nafaḥa* 'blow' : *napāḥu*; *nafaša* 'burst open' : *napāšu*; *naqara* 'hollow out, pierce' : *naqāru* 'raze, demolish';

root-vowel *i*: Ar. 'asara 'bind' : Akk. (*w*)*asāru*; *saraqa* 'steal' : *sarāqu*; *rabaḍa* 'lie down' : *rabāšu*; *raḥaša* 'wash' : *raḥāšu*; *ṣafara* 'whistle' : *ṣapāru*; 'adaba 'leave, omit' : *ezēbu*; 'ataqa 'precede' : *etēqu* 'move'; 'amada 'support' : *emēdu* 'stand'; *faqada* 'look for' : *paqādu* 'order'; *qalla* 'belittle' : *qalālu*; *malaka* 'reign' : *malāku* 'decide'; *halaka* 'perish' : *alāku* 'go'; *halla* 'shine' : *alālu*; *iasara* 'be ordered or easy' : *ešēru*; verbs with  $R_1 = \text{u}$  like *uātara* 'make odd (a number)' : (*u*)*atāru* 'be abundant'; *uataba* 'sit down' : (*u*)*ašābu*; *uārada* 'descend' : (*u*)*arādu*; *uaraqa* 'burst into leaf' : (*u*)*arāqu* 'be green'; *uālada* 'give birth' : (*u*)*alādu*.

§ 4. Agreement is of course to be found in verbs with  $R_2 = \text{u}$  or *i*:

$R_2 = \text{u}$ : Ar. *bā'a* 'return' : Akk. *bā'u* 'enter'; *dāra* 'turn, circulate' : *dāru* 'last, be eternal'; *dāka* 'crush' : *dāku* 'kill'; *dāba* 'melt' : *zābu*; *qāla* 'say' : *qālu* 'call'; *kāna* 'be' : *kānu* 'stand firm'; *lāma* 'blame' : *lāmu*; *māta* 'die' : *mātu*; *nāḥa* 'kneel down' : *nāḥu* 'repose'; *nāsa* 'drive' : *namāšu* 'move' (intrans.);

$R_2 = i$ : Ar. *bāta* 'pass the night' : Akk. *bātu*; *ḥāra* 'choose' : *ḥāru*; *dāna* 'judge' : *dānu*; *šāba* 'grow old' : *šēbu*; *šāma* 'put in' : *šāmu* 'fix, appoint'.

§ 5. Remnants of the type *iqṭal* are still attested in O. Akk., cf. the intrans. verbs:

pret. <i>ibšal</i> 'cook'	:	pres. <i>ibaššil</i>
„ <i>ilmad</i> 'learn'	:	„ <i>ilammid</i> ; Hebr. <i>ilmaḏ</i>
„ <i>islam</i> 'be reconciled'	:	„ <i>isallim</i>
„ <i>ir'am</i> 'love'	:	„ <i>irīm</i> ; Ar. <i>iar'amū</i>
„ <i>irkab</i> 'drive'	:	„ <i>irakkib</i> ; Ar. <i>iarkabu</i> ( <i>rakiba</i> )
„ <i>iqrab</i> 'approach'	:	„ <i>iqarrib</i> ; Ar. <i>iqrabu</i> ( <i>gariba</i> )
„ <i>itkal</i> 'lean'	:	„ <i>itakkil</i> ; Ar. <i>itkalu</i>

It is probable that the form *qatal*, characteristic of v. adj. denoting dimensions, is to be traced back to *\*iaqṭalu* which has receded before *iaqṭil*. E.g. *rapšu* 'broad', fem. *rapāštu*; *ma'du* 'numerous', fem. *ma'attu*; also *agru*, fem. *aqartu* 'dear', *nak(a)ru* (construct state *nakar*), fem. *na-kartu* 'stranger, enemy'.

In later language the difference of vocalism between pret. and pres. was mostly levelled in favour either of the pres. (*ibšil* like *ibaššil*; *istim*, *iqrib*, *itkil*) or of the pret. (*ilammad* like *ilmad*; *irām*, *irakkab*). This levelling is perhaps due to the pressure of the new (medio)passive *iptaras* : *iptarras*.

The above specimens correspond to the West Sem. type *iqṭalu* (*qatila*), but there are also some examples which could be considered as a counterpart of the West. Sem. type *iqṭalu* (*qatula*):

pret. <i>iblat</i> 'recover'	:	pres. <i>iballut</i>
„ <i>iggag</i> 'grow angry'	:	„ <i>iggug</i>
„ <i>imraṣ</i> 'grow ill'	:	„ <i>imarruṣ</i>
„ <i>ipšaḥ</i> 'grow calm'	:	„ <i>ipaššuḥ</i>

There is, however, no trace of a special vocalization of the prefix, i.e. of a distinction between the *ia*- and the *ii*-series.

§ 6. Finally the agreement between the Akk. stative *puris* (*parus*) and the *qatila*- (or *qatula*-) form of the West Sem. „perfective“ may be illustrated by the following equations:

Akk. <i>akālu</i> 'eat', stative 'be emaciated'	=	Ar. 'akala : 'akila 'be corroded'
„ <i>tabāqu</i> 'heap (pile) up', stative 'be heaped up'	=	„ <i>ṭabaqa</i> 'cover' : <i>ṭabiqa</i> 'lie close to'
„ <i>maḥāṣu</i> 'smash', stative 'be smashed'	=	„ <i>maḥaḍa</i> 'shake' : <i>maḥiḍa</i> 'labour (with child)'
„ <i>malū</i> 'fill', stative 'be filled'	=	„ <i>mala'a</i> : <i>mali'a</i>
„ <i>naqābu</i> 'pierce', stative 'be pierced'	=	„ <i>naqaba</i> : <i>naqiba</i>
„ <i>šapāru</i> 'send', stative 'be sent'	=	„ <i>safara</i> 'chase' : <i>safira</i> 'leave'
„ <i>šaḡālu</i> 'weigh', stative 'weigh' (intrans.)	=	„ <i>taqala</i> : <i>taqula</i> 'be heavy'
„ <i>šarātu</i> 'tear', stative 'be torn'	=	„ <i>šarata</i> 'scarify' : <i>šariṭa</i> 'be distressed'

§ 7. Between the Akk. stative and the Sem. intrans. type *qatila* (*qatula*) there are secondary differences due to the form of the attached pronominal elements:

Akk. sing. 3 <sup>rd</sup>	p. masc.	<i>šapir</i>	:	Ar. <i>safira</i>
„ „ „	fem.	<i>šaprat</i>	:	„ <i>safirat</i>
„ „ 2 <sup>nd</sup>	masc.	<i>šapr-ā-t(a)</i>	:	„ <i>safirta</i>
„ „ „	fem.	<i>šapr-ā-ti</i>	:	„ <i>safirti</i>
„ „ 1 <sup>st</sup>	„	<i>šapr-ā-ku</i>	:	„ <i>safirtu</i>
„ plur. 3 <sup>rd</sup>	masc.	<i>šaprū</i>	:	„ <i>safirū</i>
„ „ „	fem.	<i>šaprā</i>	:	„ <i>safirna</i>
„ „ 2 <sup>nd</sup>	masc.	<i>šapr-ā-tunu</i>	:	„ <i>safirtum</i>
„ „ „	fem.	<i>šapr-ā-tina</i>	:	„ <i>safirtunna</i>
„ „ 1 <sup>st</sup>	„	<i>šapr-ā-ni</i>	:	„ <i>safirnā</i>

Before the consonantal endings *-ta*, *-ti*, *-tuna*, *-tina*, *-ni* Akk. inserts *-ā-* which is etymologically justified in the 1<sup>st</sup> p. sing. (*-āku* : *anāku* = *-ta* : *atta*). The correct *etymological* analysis is *šapr-āku* (< \**šapir-āku*), with *-āku* corresponding to the personal pronoun *an-āku*, like *-ta*, *-ti*, *-tuna*, *-tina* to *atta* (< *anta*), *atti*, *attuna*, *attina*. Since, however, *šaprāku* admits a double

phonemic interpretation, *šapr-āku* and *\*šaprā-āku*<sup>5</sup>, the latter form (*šaprā-*), containing a redundant feature, has been generalized before consonantal endings. This fact eliminated an alternation of two different root-forms: *šapr-* before vowels, *šapir-* before consonants (*\*šapir-ta*, *\*šapir-tuna* etc.).

§ 8. The Akk. present *iparras*, *iparris*, *iparrus* is built upon the nominal stems *parras*, *parris*, *parrus*, resp., differing from the Sem. type *qatal*, *qatil*, *qatul* only by the gemination of R<sub>2</sub>. The value of *paris* as *nomen auctoris* of an intrans. action as against *parris*, *nomen agentis* inherent in *iparris*, may be paralleled by Engl. (one who) *has ridden* versus (one who) *is riding*. Consequently the new present of intrans.-stative verbs is, at least originally, *iparris* or *iparrus* with intrans.-stative *nomen agentis* as against *qatil*, *qatul*, the West Sem. *nomen auctoris* and *past participle*. Originally *parris* is fientive-intrans., *parrus* stative, but otherwise this distinction does not play a role in the later development of the Akk. verb. Whereas the West Sem. present *īaqtulu*, *īaqtīlu* is neuter as regards diathesis, since it comprises both trans. and intrans. verbs, the Akk. pres. distinguished, at least at the time of the introduction of the new present, between these two kinds of verbs. Hence the types:

- 1) pret. *iprus* (trans.) : pres. *iparras*
- 2) „ *iprus* (intrans.) : „ *iparris* (*iparrus*)
- 3) „ *ipris* (trans.) : „ *iparras*
- 4) „ *ipris* (intrans.) : „ *iparris* (*iparrus*)
- 5) „ *ipras* (intrans.) : „ *iparris* (*iparrus*)

Let us add, however, that the testimony of a direct semantic opposition between *iparras* and *iparris* (*iparrus*) is rather scarce: *i'aššaš* 'afflict' : *iššuš* < *\*i-aššuš* 'be afflicted'; *izaqqap* 'erect' : *izaqqup* 'raise o. s.'

§ 9. The 5<sup>th</sup> group has left only a few traces in historical Akk. (§ 5). The 1<sup>st</sup> and the 4<sup>th</sup> are well preserved. Cf.:

1) Type *iparras/iprus* (trans.) : *ibagqam/ibqum* 'pluck out'; *ibat-taq/ibtuq* 'cut, split'; *igammar/igmur* 'achieve'; *izakkar/izkur* 'mention'; *izaqqap/izqup* 'erect'; *iħabbat/iħbut* 'plunder'; *iħaššaħ/iħšuħ* 'desire'; *iħaš-šal/iħšul* 'crush'; *itarrad/itrud* 'send, chase'; *ikarrab/ikrub* 'bless, praise'; *ikaššad/ikšud* 'reach, gain'; *ikattam/iktum* 'cover'; *ilappat/ilput* 'touch'; *imaggar/ingur* 'obey' (trans.); *imahħar/imħur* 'receive, meet'; *ina''ad/in'ud* 'praise'; *inazzar/izzur* 'curse'; *inattal/iittul* 'regard'; *inassaħ/issuħ* 'pluck out'; *inassaq/issuq* 'choose'; *inaššar/iššur* 'guard'; *inaqqar/iqqur* 'destroy'; *inaššar/iššur* 'diminish' (trans.); *isahħap/ishup* 'throw down'; *isappan/ispun* 'subdue, annihilate'; *ipattar/iptur* 'release'; *iparras/iprus* 'separate';

<sup>5</sup> We must keep in mind that Akk. — just like Class. Greek — is a language where hiatuses and contractions, due to the loss of numerous intervocalic consonants, are extremely frequent.

*ipaššar/ipšur* 'abolish etc.'; *išarrap/išrup* 'dye'; *išabbaš/išbuš* 'tear away'; *išaḥḥat/išḥut* 'take off'; *išattar/ištur* 'write'; *išakkan/iškun* 'put'; *išallap/išlup* 'tear out'; *išappak/išpuk* 'pour'; *išaqqal/išqul* 'weigh' (trans.); *išarrap/išrup* 'burn' (trans.); *išarraḡ/išruḡ* 'make a present'; *itabbak/itbuk* 'pour'; *itammaḥ/itmuh* 'seize'.

Intrans. value is exceptional in this class: *iḥammaṭ/iḥmut* 'burn' (intrans.), *itarrar/itrur* 'tremble'.

A few transitive verbs of the type *iparras/ipras* remain unexplained: *imaḥḥaš/imḥaš* 'strike', *išabbat/išbat* 'take', *iša'al* 'ask'.

4) Type *iparris/ipris* (intrans.) : *idammīq/idmīq* 'be good'; *ikabbir/ikbir* 'be or become stout'; *ikammiš/ikmiš* 'to bow down'; *ima'id/im'id* 'be numerous, multiply'; *inakkir/ikkir* 'be different'; *išallim/išlim* 'be favourable'; *iḡarrib/iḡrib* 'be near, approach'; *irappiṣ/irpiṣ* 'to extend' (intrans.); *išallim/išlim* 'be intact'.

Examples like *iḡarrib/iḡrib* show that 4) continues not only the Sem. type *iḡatīl/iḡatīl*, but also verbs of the type *iḡatīl/iḡatīl*, with the levelling to *i* of the alternating root-vowels *a/i*, cf. above § 5. Levelling in favour of *a* explains *ilammad/ilmad* 'learn', *irakkab/irkab* 'drive'.

§ 10. These facts prove that the original *structural* relation (§ 8) must have at a certain moment been replaced by the inflectional (functional) relation *pres. : pret.*<sup>6</sup>:

pres. *iparris* (intrans.) → pret. *iprus*, *ipris*, *ipras*, hence *iparris : ipris*  
 „ *iparrus* (intrans.) → „ *iprus*, *ipris*, *ipras*, hence *iparrus : iprus*  
 „ *iparras* (trans.) → „ *iprus*, *ipris*

As a rule the trans. verbs *iparras* have the pret. *iprus*. Where the inherited pret. *ipris* is maintained, the corresponding pres. is *iparris* on the model of the intrans. verbs (*iparris : ipris*).

Therefore we find in 2) *iparrus* (intrans.) : *iprus*, and in 3) *iparris* (trans.) : *ipris*, e.g.:

2) *iballut/iblut* 'live'; *izaqqup/izqup* 'raise o.s.'; *iḥallup/iḥlup* 'be covered, draped'; *idammum/idmum* 'wail, lament'; *imaqqut/imqut* 'fall'; *inappuṣ/ippuṣ* 'blow, respire', *inappuṣ/ippuṣ* 'extend' (intrans.); *ipaḥḥur/ipḥur* 'assemble' (intrans.); *iraggum/irgum* 'cry'; *irahḥuṣ/irḥuṣ* 'trust'; *irammuk/irmuk* 'take a bath, wash'; *irammum/irmum* 'roar, thunder'; *irappud/irpud* 'wander'; *išaggum/išgum* 'shout, make noise';

3) *izabbil/izbil* 'carry'; *ila'ib/il'ib* 'oppress'; *ilabbīn/ilbīn* 'flatten'; *inak-kim/ikkim* 'heap'; *inakkis/ikkis* 'cut'; *išakkip/iškip* 'upset'; *ipagqid/ipqid* 'protect, take care of'; *ipaššit/ipšit* 'extinguish'; *ipattiq/iptiq* 'prepare'; *irahḥiṣ/irḥiṣ* 'rinse, flood'; *išallit/išlit* 'cut away'.

<sup>6</sup> The notions *structural* and *functional* relation have been explained in chap. II § 5.

Thus the intrans. type *iparris* : *ipris* exercises a pressure both on intrans. *iparrus* : \**ipras* (hence *iprus*), and on trans. *iparras* : *ipris* (> *iparris* : *ipris*), leaving intact *iparras* : *iprus*.

§ 11. The original root-vowel of certain transitive verbs remains uncertain when compared with the corresponding Ar. forms: Akk. *ḫakāmu* (*i/i*) 'understand' : Ar. *ḫakama* (*u*); Akk. *naqābu* (*i/i*) 'pierce' : Ar. *naqaba* (*u*); Akk. *rašāpu* (*i/i*) 'build' : Ar. *rašafa* (*u*) 'pave'; Akk. *šabāru* (*i/i*) 'break' : Ar. *tabara* (*u*) 'wreck, destroy'.

Conversely the original *i*-vocalism of certain other trans. verbs is evidenced by correspondences like Akk. *abātu* (*a/u*) 'destroy' : Ar. *habata* (*i*); Akk. *kabāsu* (*a/u*) 'tread' : Ar. *kabasa* (*i*) 'make even'; Akk. *kasāpu* (*a/u*) 'break into pieces' : Ar. *kasafa* (*i*); Akk. *lapātu* (*a/u*) 'touch' : Ar. *lafata* (*i*) 'turn, fold'; Akk. *parāsu* (*a/u*) 'sever, cut off' : Ar. *farasa* (*i*) 'tear (to pieces)'; Akk. *qatāpu* (*a/u*) 'pluck' : Ar. *qatafa* (*i*); Akk. *šarāmu* (*a/u*) 'cut off, shear' : Ar. *šarama* (*i*) 'cut off, tear'; Akk. *šapāku* (*a/u*) 'pour' : Ar. *safaka* (*i*) 'shed'; Akk. *šapāru* (*a/u*) 'write' : Ar. *safara* (*i*); Akk. *tabāqu* (*a/u*) 'stack up' : Ar. *ṭabaqa* (*i*) 'cover'. Akk. *a/u* < *a/i* (§ 10).

§ 12. Finally an original *u* may be surmised for certain intrans. verbs like Akk. *ebēru* (*i/i*) 'cross'; *batālu* (*i/i*) 'be exhausted'; *barāqu* (*i/i*) 'lighten, flash'; *edēšu* (*i/i*) 'be renewed'; *šaqtu* (*i/i*) 'fall', where the Ar. counterparts have the vowel *u*.

§ 13. The old vowel-gradation *a* : *i* is still apparent in some irregular verbs like *inaddan* 'gives' : pret. *iddin*; *ubbal* : *ūbil* (*wabālu* 'carry') etc. The preliterate ablaut *a* : *i* is moreover borne out by the derived classes. An opposition like pres. *uparras*, *uṣapras*, *iparras* : pret. *uparris*, *uṣapris*, *ipparis* presupposes the existence of a model pres. *a* : pret. *i* existing in some basic forms.

§ 14. The verbs with  $R_2 = R_3$  show the same distributions as the regular type: 1) trans. verbs with the ablaut *iparras*/*iprus* : *ḫarāru* 'dig'; *madādu* 'measure'; *šadādu* 'draw'; *šakāku* 'harrow'; *šalālu* 'plunder'; 2) intrans. verbs with ablaut *iparris*/*ipris* : *elēlu* 'become clean, pure'; *danānu* 'grow strong'; *qalālu* 'diminish'; 3) intrans. verbs with ablaut *iparrus*/*iprus* : *da-bābu* 'speak'; *damāmu* 'groan'; *zanānu* 'rain'.

§ 15. The reason why the formation \**iaqtal* etc. should be considered a Sem. heritage, a derivative form in Sem., but at the same time a potential successor of the old 'root-present' *iaqtulu* etc., is its Eth. counterpart *ieqattel*. The originally derivative character of the form results from the fact that verbs with  $R_2$  or/and  $R_3 =$  „laryngeal“ have also the present *ieqattel*, not \**ieqattal*. In both Akk. and Eth. the pres. indic. was renewed and the old form relegated to secondary functions. The difference between the old and the new form could henceforth concern tense, mood or mode of action, cf. Slav. *sъberę* (replaced by the new pres. *sъbiraјę*) which became

a future (e.g. in Pol. or Russ.) or a „general pres.“ (e.g. in Serbo-Cr.), or the Indo-Ir. formation *karati*, „general pres.“ or „subj.“.

§ 16. The old pres. type *iaqtulu* is preserved in Akk. (*iprusu*) in a secondary syntactical function. In Sem. the so-called „imperf.“ *iaqtulu* functioned primarily as a present-future, but could also be used to express *simultaneity* with a past action (GAG p. 211). It is just to this secondary function that *iprusu* was restricted in Akk. after the introduction of the new present-future *iparras* etc. With the meaning *simultaneity* changing to *past action depending on another (past) action* the old „imperf.“ *iaqtulu* (*iprusu*) became a mood of subordination appearing in different kinds of subordinate clauses, in the first instance in relative clauses. The restriction of Sem. *iaqtulu* to a secondary function, due to the generalization of a new form of the indicative, occurs also in Eth.

The use of the construct state and of the pronominal element *ša* functioning both before the adnominal genitive (*bīt(u ša)šarri(m)* ‘the house of the king’) and before a relative clause, makes one consider the verb of relative and some other subordinate clauses as an equivalent of a nominal genitive. This is a *secondary* syntactical function of the personal verb (primarily used in the main clause). The old indic. *iprusu* is restricted to this secondary function. Cf. *L’apophonie en sémitique*, 1961, p. 52—55, p. 60; W. Eilers in *Gedenkschrift W. Brandenstein*, Innsbruck 1968, p. 241—246.

§ 17. The relation Akk. *iprus* : *iprusu* was productive. The lack of final vowel in *iparras* (< \**iaqattalu*) is not the result of a phonetic apocope<sup>7</sup> but of a morphological distribution:

*iprusu* (subj.) : *iprus* (indic.) = *iparrasu* (subj.) : *iparras* (indic.), and similarly in the stative.

A comparison with Ar. shows that the paradigms *iaqtulu* and *iaqtul* were only in some inflectional forms distinguished by *u* : zero, whereas in other forms the old indic. differed from the paradigm of *iaqtul* by a surplus of *-na* (Ar. *taqtulāna*, *iaqtulūna*, *taqtulūna*) or *-ni* (*iaqtulāni*, *taqtulāni*). It is therefore probable that the elements *-na*, attested in archaic Akk., sporadically in dialectal texts of Bab., and *-ni* in Ass., the latter in complementary distribution with *-u* in O. Ass. (v. Soden GAG p. 108), are etymologically identical with the endings *-na*, *-ni* of Ar.

The position of *-ni*, which is attached at the extreme end of the personal verb, viz. after the pronominal suffixes, finds its explanation in the purely *syntactical*, not semantic, function of the Akk. „subjunctive“:

*iprusū* : *iprusū-ni* = *iprusūšu* : *iprusūšu-ni*

(the original proportion being *iprusū* : *iprusūšu* = *iprusūni* : \**iprusūnišu*).

<sup>7</sup> Cf. the preservation of the declensional endings *-u*, *-i*, *-a*.

The late Akk. form *iprusa*, apparently a survival of the Sem. subjunctive, is actually a „ventive“ in *-am*, *GAG* p. 107.

§ 18. The verbal classes with *n-* and *t-*prefix were in Sem. intrans. Therefore they represented at the same time likely successors of the old pass. (*iūqtalu*), cf. *nif'al* in Hebr. and the *t*-pass. in Akk. But the *t*-formation became also the source of a new Akk. tense, the *perfect*. In order to explain the double development of Akk. *iptaras* its original value, at least in Protoakk. if not in Sem., must be redefined as the *expression of state* (resulting from a previous action).

There is, as proved by parallels from Germanic, Romance and other languages, a close connection between the functions *passive* and *perfect*, both being founded on an original value *state* (resulting from previous action). Cf. Fr. *il bat : il est battu*, *il meurt : il est mort*, structurally identical, going back to *battu*, *mort*, denoting *state* viz. of 'having died' or '(being) beaten'.

As a rule the Akk. stative is not formed from verbs denoting a „non-determinative“ action, like 'walk', 'run', 'complain' etc. An interesting instance of such a semantic split of intrans. verbs occurs in modern languages where e.g. in German such verbs form their perfect with *haben* as against *sein* in „determinative“ verbs of motion, e.g. German *ich habe geklettert* versus *ich bin geklettert (auf den Baum etc.)*. The same distribution of the auxiliaries *avoir* and *être* occurs in O. Fr.

In Akk. the form *iptaras* functioned originally as a passive with relation to trans. *iprus*, *ipris*, *iparras* (cf. *il est battu : il bat*), as a perfect with relation to intrans. verbs (cf. *il est mort : il meurt*). The subsequent extension of the perfect *iptaras* to all verbs, trans. as well as intrans., was a consequence of the semantic change of *state resulting from previous action* to *previous action*. The spread of the perfect tense, from intrans. to trans. verbs, is again a diachronic phenomenon attested in a great number of languages. In Akk. the generalization of the perfect *iptaras* was moreover facilitated by the later restriction of *t* as morpheme of the pass., viz. its gradual replacement by the nasal prefix. The latter is already the normal exponent of the pass. value in the basic class (*iprus : ipparis*) whereas the derived classes use the prefix *t-* (*uptarris*, *uštapis*). The relative chronology implied is confirmed by the *semantic dispersion* characteristic of the verbal forms with *t*, reminding us of the uses of the Greek mediopassive : reflexive, reciprocal, scarcely different from the active, etc. It is sometimes difficult to establish a semantic difference between the stative of the basic form and the stative of the *t*-form. Derived form in Sem., inflectional form in Protoakk., the *t*-class obtains a derivational status in historical Akk. But the lowering of the status of *t* refers only

to its function as the morpheme of the pass. of the basic form, not to its function as the morpheme of the perfect.

§ 19. It is in view of the above facts that the stative of the *t*-class must be considered as the basic form of the *t*-perfect. The opposition *iprus/ipris* : *iptaras* explains the original double role of the *t*-prefix in Akk. depending on whether *iprus/ipris* was trans. (opposition active : pass.) or intrans. (opposition action : state).

After the generalization of the perfect the *t*-form became ambiguous with relation to trans. verbs. First the *t*-pass. adopted the root-vocalism of the pres. : trans. *iparris* : pass. *iptaris* (inherited), hence pres. *iparras* : pass. : *iptaras*. Then the model of intrans. *iparris* : perf. *iptaris* entailed the creation of trans. *iparras* : perf. *iptaras*. This is just the state directly attested in historical Akk.: the perf. of the fundamental form and the pret. of the *t*-class are frequently homonymous<sup>8</sup>.

The fate of the *t*-prefix in Akk., the incorporation of the *t*-verbs into the conjugation of the basic verb, i.e. the *grammaticalization* of the *t*-prefix, its advancement from the originally *derivative* to the new *inflectional* status explains the striking deviation of the vocalism of *iptaras*, pret. pass. or perfect, from the Sem. prototype *iaqtatil*<sup>9</sup>.

The difference between the old pret. *iprus* and the perfect *iptaras* is transposed to the pass. : *iptaras* = pret. of the pass. *iptarras*, versus *iptatras* (with a repetition of the *t*-affix) = perfect of the pass.

§ 20. Besides the present-future *iparras*, the preterite *iprus* and the stative *paris* we must posit a fourth tense for Akk. : the *t*-perfect. It may be formed both from basic and from derived verbs, cf. *uptarris*, *uštapis* besides the old preterites *uparris*, *ušapis*. For the further history of the Akk. perfect and its competition with the inherited pret. cf. v. Soden *GA* p. 105 f.

Just as in the basic form a double *t(a)*- is inserted when forming the perfect of the pass. of derived verbs, e.g. *uparras* : *uptatarras*, *uparris* : *uptatarris*.

§ 21. The chronological stratification of the (medio)passive formations in Akk. seems clear:

- 1) *\*ipras* (< *\*iqtalu* or *\*iugtalu*); only traces attested (deponents);
- 2) *iptaras* (*\*iaqtatilu*).
- 3) *ipparis* (*\*ianqatilu*);

<sup>8</sup> Once a passive *iptaras* ceased to be a member of the derived *t*-class and was incorporated into the conjugation of the basic form, a new pass. pres. was created: *iptarras*, modelled on the act. *iparras*.

<sup>9</sup> The successor of the *t*-pass., viz. the *n*-pass., is also dominated by the pres. act. Cf. *iparras* : pass. *ipparras* (< *\*inparras*) or *ipagqid* : *ippagqid*.



The chronological priority of 2) against 3) is proved by the fact that the *t*-formation is the only one to appear in all four classes, e. g. *uparris*, *ušapris* (*uptarris*, *uštapis*), with 2) still existing beside 3) in the basic form. The *t*-formation, appearing in all classes, is an *inflectional* form, the *n*-formation being only a *derivative* of the basic class. On the other hand 1) is older than both 2) and 3), cf. the use of *paris* as the stative of *ipparris* and the use of *purruš*, *šupruš* (without dental infix) as the statives of *uptarris*, *uštapis*.

§ 22. The element *t* is also responsible for the Akk. *-tan(a)*-infix, which has no counterpart in the other Sem. languages. The nasal is due to a morphological interpretation of geminated consonants since in Akk.  $R_2R_2$  can be considered either as  $R_2 + R_2$  or as  $n + R_2$ . The (medio)pass. of *uparris* is *uptarris* in the pret., *uptarras* in the pres. The primary function of the double consonant is  $r + r$ , the secondary function  $n + r$ . Now the appreciation of *uptarris* as *\*uptanris* leads to a present *uptanarras*, cf. *iprus/ipris* : *iparras*. The possibility of a double interpretation of *uptarris* permits a differentiation between the presents *uptarras* and *uptanarras*, the latter taking over a *secondary* function of *uptarras*, viz. expressing habit and iterativity<sup>10</sup>.

The other classes follow suit. The pattern *uparras* (present): *uptanarras* (iterative) gives rise to *iparras* (pres.) : *iptanarras* (iter.); *ušapras* (pres.) : *uštanapras* (iter.).

The original form of the infix is *-tan-*, the *a-* of *-tana-* representing an „enlargement“ to be attributed to the model *ipris/iprus* : *iparras*.

<sup>10</sup> Iterativity being one of the semantic functions of the 2<sup>nd</sup> or D-class.

## Chapter IV. THE WEST SEM. VERBAL SYSTEM

§ 1. The Sem. pret. *ḡaqtul/ḡaqtīl*, whose old function is still attested not only in Akk. (*iprus*) but also in the North-West Sem. dialect of the el-Amarna glosses, probably also in Ugar. (*yqtl* = *ḡaqtulu* and *ḡaqtul*), underwent modifications in West. Sem., partly structural and partly functional. In Hebr. it is still used, with *waw consecutivum* under the so-called short form, as a narrative or historical tense just like Akk. *iprus*. The phonetic difference between *ḡaqtulu* and *ḡaqtul* is continued by Hebr. *ḡōmer* : (ḡai)-*ḡōmer*, *ḡībneḡ* : (ḡai)-*ḡībneḡ* etc. The short form appears also after certain particles, and even without such conditioning in poetic texts.

A similar restriction of the original use of *ḡaqtul* occurs in Class. Ar., the old meaning being preserved as a rule after negation (*lam*) e.g. *kataba* 'he wrote' : *lam ḡaktub* 'he did not write', only exceptionally without negation.

The forms *ḡaqtul* function in Ar. predominantly as a *mood*, the 'jussive', replacing the lacking forms of the imperat. of the 3<sup>rd</sup> p. etc. : *ḡaktub* 'let him write', *liḡaqtul*, *faliḡaqtul* and the prohibitive *lā taqtul(i)* and so on, on the other hand as a *potentialis* or *irrealis* in conditional sentences ('in *ḡaktub*, *lau ḡaktub*), both in the subordinate and in the main clause. This usage may be easily reconciled with the old value of *ḡaqtul* (pret.) owing to parallels from modern languages: Engl. *if he wrote...*, Fr. *s'il écrivait*, Russ. *esli by (na)pisal*, the modern *irrealis* being everywhere the indic. of a pret.<sup>1</sup> This explanation is furthermore borne out by the competition between *ḡaqtul* and the new pret. *qatala*, tending to oust *ḡaqtul* in conditional sentences, both in the subordinate and in the main clause: 'in *ḡaktub* (> *kataba*)... 'aktub (> *katabtu*). The Ar. jussive competes with the „perf.“ *qatala* also in sentences expressing wish, order etc.

The partial elimination of *ḡaqtul* from the cadre of the West Sem. verbal system was preceded by the creation and the spread of the new pret. *qatala*, a major characteristic feature of this dialectal group.

§ 2. The basic form of the Akk. stative is the verbal adjective *qatīl*

<sup>1</sup> Cf. Russ. *by*, the 3<sup>rd</sup> p. sing. of the Slav. aorist of *byti*.

(*qatul*) denoting a state resulting from a previous action<sup>2</sup>. The underlying fientive verb can be trans. or intrans. In the former case *qatil* (*qatul*) has as a rule a *passive* value. Trans. use of the stative is an exceptional fact. It is a context-conditioned, hence secondary, function of *paris* (from trans. *iprus*, *ipris*) rendered possible by the relation *iprus* or *ipris* (intrans.): *paris* (stative); e.g. *šabtu* 'seized' and 'having seized (= possessing)'.

In some trans. verbs a characteristic semantic difference has developed between the pres. and the stative: *aḥāzu* 'take': stative 'have'; (*našd'u* >) *našā* 'lift': stative 'hold'. These oppositions remind us of (Lat. *capio* =) German *heben*: German *haben*.

As regards the vocalism of *R<sub>2</sub>* the normal and productive type was *qatil*. The type *qatul*, e.g. *maruṣ* 'he is ill', attested in a number of cases, may be regarded as being originally a derivative rather than as an inflectional form of the verb. Its occurrence with inflectional pronominal suffixes, like *marṣat* 'she is ill', *marṣāku* 'I am ill', may be explained as a special case of the overall Akk. construction *any noun or adj. + inflectional pronominal suffixes*, e.g. *šarr-āku* 'I am king', *zikar-āku* 'I am a man', *sinniṣ-ā* 'they are women', from *šarru*, *zikaru*, *sinniṣu*, respectively. The difference between *marṣ-āku* and *šarr-āku* consists in the *secondary incorporation* of *marṣ-āku* into the conjugational system of *imruṣ*, a consequence of the strong etymological and semantic affinity between the verb *marāṣu* and its deverbative adj. *marṣu*, *maruṣ*.

§ 3. These facts suggest an old distinction between *qatil* and *qatul*, analogous to the difference between a past part. and the corresponding verbal adj., i.e. between an inflectional form like Engl. *learn(e)d* (monosyllabic) and *learned* (disyllabic), or between *melted* and *molten*. As a rule all verbs have participles, whereas verbal adj. are formed only from some of them<sup>3</sup>. The inference is that besides the inflectional form *qatil* + suffixes some verbs knew the form *qatul* + suffixes with a difference of

<sup>2</sup> The term *action* is used in the wider sense, viz. in opposition to *state*. It is applied both to trans. and intrans. fientive verbs (like „fall asleep“, Fr. *s'endormir*), but not to stative verbs (like „sleep“, Fr. *dormir*).

<sup>3</sup> As a matter of fact the form *qatul* is represented in Akk. rather by deverbative adjectives that by statives belonging to the conjugation of the verb. Cf. *arqu*, fem. *aruḡtu* 'yellow' < *arāqu* 'turn (or be) yellow'; *ḥarbu*, *ḥarubtu* 'destroyed' < *ḥarābu* 'be destroyed'; *lamnu* (*lemnu*), *lemuttu* 'bad' < *lamānu* (*lemēnu*) 'become bad'; *marṣu*, *maruṣtu* (*marultu*) 'bad' < *marāṣu* 'worsen, deteriorate'; *šamru*, *šamurtu* 'violent' < *šamāru* 'to become enraged'; *paṣqu*, *paṣuḡtu* 'difficult, onerous': *pašāqu* 'be difficult'; *šamuttu* 'harnessed' (fem.) < *šamādu* 'put to (horses)'; *šarḥu*, *šaruḥtu* 'overwhelming, victorious' < *šarāḥu* 'be victorious'. — A number of fem. abstracts of the type *qatul(a)tu* points to old adjectives (*qatul*), e.g. *arurtu* 'drought' < *erēru* 'to burn' (intrans.); *ašuṣtu* (*ešeštu*) 'ache, pain' < *ešešu* 'suffer'; *nakuttu* 'anxiety' < *nakādu* 'be afraid'; *šaburtu* 'violence' < *šabāru* 'seize'; *qaburtu* 'interment' < *qabāru* (*qebēru*) 'inter'.

meaning as e.g. in Fr. *il a maigri* versus *il est maigri*, (or Engl. *he has gone* against *he is gone*). Although the latter construction may be taken at its face-value as a nominal sentence, it can be also considered as a conjugational form of *maigrir*.

In Akk. both *qatil* + suffixes and *qatul* + suffixes are from the etymological point of view nominal sentences, but *qatul*, as in *marṣ-āku* (*marus*), represents a subordinate layer, its use restricted by the semantic value of the respective verbs.

The Akk. development was probably a simplification of the original coexistence of *qatil* and *qatul* for the same verb, the adoption of *qatil* as inflectional form being the common solution, whereas *qatul* remained a derivative except in the rare cases where it had replaced *qatil* as the regular form of the stative.

§ 4. The West Sem. 'perfect(ive)' *qatila* (intrans. fientive), *qatula* (intrans. stative) is structurally the continuation of an former stative as represented by Akk. *paris*, *parus*. But its old value underwent the well-known change *state* > *past action* (entailing the state), stative value having been preserved only as a secondary function (by the form *qatula*). Old statives with present meaning are found in Class. Ar.: *ni'ma* 'is good', *bi'sa* 'is bad' (their structure excludes an old „perf.“). Associated with the pres.-future *iqṭalu* (*iṭṭalu*) and the intrans. pres.-future *iḡṭulu*/*iḡṭilu* the new intrans. pret. stood in opposition with the old narrative tense (*iḡṭal*/*iṭṭal* or intrans. *iḡṭul*/*iḡṭil*). Having reached this stage the intrans. pret. *qatila* triggered the parallel formation of *qatala* belonging to the trans. pres. The differentiation *qatila* (*qatula*) : *qatala* may be ascribed to the replacement of *a* by *i* in the neighbourhood R<sub>2</sub>, R<sub>3</sub> = „laryngeal“. Displaced by the old form, *fa'ala* was restricted to a secondary, viz. trans. (causative) function, hence also *qatila* : *qatala*<sup>4</sup>. The West Sem. difference between the „perf.“ *qatala* and the „perf.“ *qatila* (*qatula*) has therefore no direct relation with the Akk. opposition (*i*)*parras* : (*i*)*parris*. The trans. - causative character of *qatala* versus *qatila* (*qatula*) is paralleled by the Akk. opposition (*i*)*parras* : *paris*. As regards the relation *qatila* : *qatula* it reflected at least in Common Sem., but probably still in West Sem., a distinction similar to Fr. *il a maigri* : *il est maigri*. The type *qatula* was therefore subordinate to *qatila*. It could exist only with verbs whose meaning was compatible with such a distinction. Therefore the three perfects

<sup>4</sup> The history of the West Sem. perfect *qatala*, *qatila* (*qatula*) shows a close similarity with the development of the I.E. perfect, originally only intrans. as evidenced by Greek, or with that of the Romance „analytic“ perfect. Lat. has only *amatus sum*, the form *amatum habeo* (Fr. *j'ai aimé* etc.) being an innovation of Romance. The partial replacement of the West Sem. pret. *iḡṭul*/*iḡṭil* by *qatala* finds again a parallel in Romance *amatum habeo* for *amavi*.

*qatala*, *qatila*, *qatula* did not function on the same level. It was the intrans. *qatila* which contrasted with the trans.-caus. *qatala*, both of them being *fientive*.

The double opposition *qatala* : *qatila* (trans. : intrans.) and *iqṭalu* : *qatila* (pres. : perfect) is fundamentally identical with the double function of the auxiliary 'to be' in Fr. *il bat* : *il est battu* and *il vient* : *il est venu*.

§ 5. The creation of the new preterite which was to play a central role in the inflection of the West Sem. verb, gave rise to the fundamental types of conjugation (class I):

#### Conjugation I (basic)

	Ia (trans.)	Ib (intrans.)
„Imperf.“		<i>ṣaqtu/ṣlu</i>
„Perf.“	<i>qatala</i>	<i>qatila</i> ( <i>qatula</i> )

#### Conjugation II (derivative of Ia)

„Imperf.“	<i>ṣi/ṣṭalu</i>
„Perf.“	<i>qatila</i> ( <i>qatula</i> )

The conjugations I, II must not be confounded with the verbal classes I, II, III etc. (cf. Ar. *qattala*, *qātala* and so on). The conjugations I, II belong to class I (primary verb).

§ 6. The participle *qātil* was probably restricted to the trans. conjugation Ia. At any rate Hebrew verbs belonging to II have only the participles *qātil*, *qātul*. This is confirmed by the testimony of Akk. whose stative verbs (corresponding to West Sem. conjugation II) do not form the participle *pāris* (v. Soden *op. cit.* p. 111), whereas transitive verbs oppose *pāris* (active) to *paris* (passive).

§ 7. The forms *ṣiṭṭalu* (*ṣiṭ'alu*) and *ṣuṭṭalu* (*ṣuṭ'alu*) of II may be called mediopassive. Strongly associated with the trans. conjugation Ia they had a semi-derivational and semi-inflectional status. Judging by the historical outcome in West Sem. it is *ṣuṭṭalu* which finally became an infl. form, viz. the passive of trans. *ṣaqtu/ṣlu*, whereas *ṣiṭṭalu* remained the intrans. derivative of Ia. The dissociation of intrans. *ṣiṭṭalu* and the pass. *ṣuṭṭalu*, up to a certain moment united by the common perfect *qatila*, was implemented by the creation of a special pass. „perfective“:

$$\begin{aligned} &\dot{\text{ṣ}}\dot{\text{i}}\dot{\text{ṭ}}\dot{\text{ṭ}}\text{alu} : \dot{\text{ṣ}}\dot{\text{u}}\dot{\text{ṭ}}\dot{\text{ṭ}}\text{alu} = \text{qatila} : \text{qatila} \\ &(i > u = i > a > u, \text{ hence } a > u, \text{ cf. chap. II § 17}). \end{aligned}$$

§ 8. The original semantic opposition between the derivative *ṣuṭṭalu* (Ar. *ṣaqtalu*) and the basic trans. *ṣaqtu/ṣlu* is proved by numerous examples showing the mediopass. function of the former. In the Qāmūs the difference

is explained as corresponding to the relation of class I to class II, IV or of class VII, VIII, V to class I, e.g.:

*ḥamiša* 'be angry' : *ḥamaša* 'make angry' = *ḡaḏiba* : *'aḡḏaba*  
*kasīja* 'dress' (intrans.) : *kasā* 'dress' (trans.) = *labisa* : *'albasā*  
*bahiḡa* 'rejoice' : *bahaḡa* 'make rejoice' = *fariḡa* : *farraḡa*  
*naḡida* 'escape' : *naḡaḏa* 'save' = *naḡā* : *naḡḡā*  
*balita* 'be cut off' : *balata* 'cut off' = *inḡaṭa'a* : *ḡaṭa'a*  
*naḡiza* 'be fulfilled' : *naḡaza* 'fulfill' = *inḡaḏā* : *ḡaḏā*  
*ḡaliba* 'assemble' : *ḡalaba* 'convoke' = *iḡtama'a* : *ḡama'a*  
*sakira* 'be filled' : *sakara* 'fill' = *imtala'a* : *mala'a*  
*ḡatima* 'be soiled' : *ḡaṭama* 'soil' = *talattaha* : *lataha*  
*naḡiba* 'be pierced' : *naḡaba* 'pierce' = *taḡarraḡa* : *ḡarraḡa*

Cf. also periphrastic explanations like *ḡazina* 'be sad' : *ḡazana* 'sadden' (trans.) = *ṡāra ḡazinan* : *ḡa'alahu ḡazinan*; *faṭiḡa* 'be large' : *faṭaha* 'enlarge' = *ṡāra ariḡan* : *ḡa'alahu ariḡan*.

Of the above relation *ḡatila* : *ḡatala* there are scarcely traces left in Hebr. Cf. „perf.“ *ṡarar*, imperat. *ṡor* 'bind' : *ṡar*, *iṡṡar* 'be bound'; *mālē* 'be full', *mlā'p* (once) '(it) filled him'.

On the other hand the old semantic relationship between *ḡatila* and the West Sem. passive *ḡatila* often becomes an equivalence, expressly noted in a considerable number of cases: Ar *'aṭima* = *'uṭima* 'suffer from constipation'; *ḡadira* = *ḡudira* 'have the small-pox'; *ḡariba* = *ḡuriba* 'be pillaged'; *ḡaḏiba* = *ḡuḏiba* 'be green'; *'asira* = *'usira* 'be difficult'; *'aliḡa* = *'uliḡa* 'attach oneself' etc. etc.

§ 9. In West Sem. the vocalism of *ḡatala*, *ḡatila* (*ḡatula*) is not independent but determined by the meaning. An independent vocalism exists only in the „imperf.“ of Ia and Ib: *iḡṭulu*, subj. *iḡṭula*, imperat. *ḡṭul*, narrative *iḡṭul*. The restriction of the fundamental vocalism of Conj. Ia and Ib to the timbres *i*, *u* is an after-effect of the grammaticalization of the contrast *ḡṭul*, *ḡṭil* (Ia) : *ḡṭal* (II). Original verbs of I with root-vocalism *a* (\**iḡṭalu*) could have been adapted, if transitive, by changing to *iḡṭu/ilu*; if intransitive, by replacing the *a* of the prefix by *i* (*iḡṭalu*). At any rate West Sem. originally hardly knows the type \**iḡṭalu* except in the case of *R<sub>2</sub>* or *R<sub>3</sub>* = „laryngeal“ (*iḡf'alu*)<sup>5</sup>.

§ 10. The form *iḡṭalu* of conj. II was fully incorporated in West Sem. (if not earlier) into the conjugation of the trans. verb (Ia). Productive in Ar. it is attested in Hebr. chiefly in the derived classes (*pu'al*, *ḡof'al*

<sup>5</sup> Ar. has *rakana* 'lean upon, rely' : *iḡarkanu*, but *rakina*, *iḡarkanu* has the same meaning. From Eth. Brockelmann GVG I p. 547 quotes examples like *iḡerkab* 'find' : *rakaba* (Ar. has *rakiba*); *iḡeḡab* 'guard' : *'aḡaba*; *iḡeṭab* 'cross' : *'ataba*, but owing to the confusion of *ḡatala* and *ḡatla* (< *ḡatila*, *ḡṭila*) the testimony of Eth. is not reliable.

from act.-trans. *pi'el*, *hif'il*)<sup>6</sup>. In the basic form examples seem at first bluish rare: *ḡuttan* 'is given' (*nāḡan*); *ḡuqqah* 'is taken' (*lāqah*); *ḡuṣar* 'is formed' (*ḡāṣar*); *ḡū'ār* 'is under a curse' (' — *r* — *r*); \**zurrū* (*zorū*) 'they have been squeezed out' (*z-r-r*); *ḡūdaš* 'is threshed' (*d-ḡ-š*); *qorā* 'was named' (*qārā*); *uśšēḡī* 'I was created'. According to Gordon (*Manual* p. 65 note) „the passive *gal* was common in biblical Heb., but wherever the consonantal text allowed it, the Massoretes pointed it as *nif'al* (or *pu'al*), under the influence of postbiblical Heb., where pass. *gal* does not exist. Accordingly, they could change *ḡuqtal* to *ḡuqqātēl*, but not *ḡuttan* to *ḡinnāḡēn*“.

The characteristic vowel *i* of *qutīla* is perhaps to be found in the form *hunnīḡā* 'she has been put' (Ar. *'unīḡat*). Biblical Aram. has *ḡihībū* 'they have been given', *hēḡīmaḡ* 'she stood'.

In the 2<sup>nd</sup> mill. B. C. the passive *ḡuqtalu* is well attested in the el-Amarna texts, e.g. (*mi-i*)*m-mu ša yu-ul-ku* 'whatever has been taken' from *l-q-ḡ*. Also in Ugar., e.g. *kyld bn ly* (= *kī-ḡūladu binu liḡa*) 'a son will be born to me' from *ḡ-l-d*.

§ 11. As already mentioned, the new form of the pass., *ḡuqtalu* in the imperf., *qutīla* in the perf., was proportionally introduced into the derived classes, thus e.g. in Ar., on the model *ḡaqtīlu* : *ḡuqtalu* and *qatala* : *qutīla*:

class	II	active	<i>ḡuqattīlu</i> , <i>qattala</i>	:	passive	<i>ḡuqattalu</i> , <i>quttīla</i>
„	III	„	<i>ḡuqātīlu</i> , <i>qātala</i>	:	„	<i>ḡuqātalu</i> , <i>qūtīla</i>
„	VII	„	<i>ḡanqatīlu</i> , <i>inqatala</i>	:	„	<i>ḡunqatalu</i> , <i>unqutīla</i>
„	VIII	„	<i>ḡaqtatīlu</i> , <i>iqtatala</i>	:	„	<i>ḡuqtatalu</i> , <i>uqtutīla</i>
„	X	„	<i>ḡastaqtīlu</i> , <i>istagtala</i>	:	„	<i>ḡustagtalu</i> , <i>ustuqtīla</i>

Heb. *ḡaqtēl*, *qittēl* (vowel of the imperf.) : *ḡuqtāl* (*u* of the perf.), *quttāl* (*a* of the imperf.); *ḡaqtīl*, *hiqtīl* (vowel of the imperf.) : *ḡāqtal*, *hāqtal* (*a* of the imperf.).

Thus the ablaut *i* : *a* serving in Akk. to distinguish the pret. and the pres. of the derived forms, plays a different role in West Sem.

§ 12. The dialectal developments of West Sem. imply as common basis and starting-point the following verbal system:

Ia	Ib	II
<i>ḡaqtu/īlu</i> : <i>qatala</i> ;	<i>ḡaqtu/īlu</i> : <i>qatīla</i> ( <i>qatula</i> );	<i>ḡiqtalu</i> , <i>ḡuqtalu</i> : <i>qatīla</i> ( <i>qatula</i> )
		(derivative of Ia)

The first step was the incorporation of *ḡuqtalu* (and *qutīla*) with conj. I:

Conj. Ia (trans.)

Conj. Ib (intrans.)

active passive

„imperf.“ *ḡaqtī/ulu* *ḡuqtalu* *ḡaqtī/ulu*

<sup>6</sup> Sometimes *pu'al* or *hōf'al* serves as the pass. of the basic *gal*, e.g. *t'uk-(k)lū* < *āchal* 'eat, consume'.

„perf.“	<i>qatala</i>	<i>qatila</i>	<i>qatila (qatula)</i>
	↓		
	Conj. II		
„imperf.“	<i>iqṭalu</i>		
„perf.“	<i>qatila (qatula)</i>		

The next development consisted in the pressure of Ia on Ib (absorbed by Ia) and the pressure of Ia (+ Ib) on II.

§ 13. An important innovation of West Sem. is the gradual replacement of *qatila* by *qatala* in the conj. Ib (intrans. *iaqtu/ilu*). This is the result of the tendency to restrict the perf. *qatila* to the intrans. conjugation II.

Referred to an intrans. verb Akk. *paris* denoted a state whereas the same form had as a rule a pass. meaning with the relation to a trans. verb. In West Sem. *qatila* was first replaced by *qatala* when used as the perf. of a trans. verb. The ousting of *qatila* by *qatala* in conj. Ib represents an expansion of *qatala* comparable to the spread of the auxiliary „have“ at the expense of „be“ in the history of Engl., Span., Roum. It is probable that the final disappearance of *qatila* in conj. Ib was preceded by a temporary hesitation between *qatila* and *qatala*. There may have been even a transient differentiation comparable to German *ich bin geritten* : *ich habe geritten* and so forth.

§ 14. The West Sem. spread of *qatala* at the expense of *qatila* became possible only after the creation of the pass. form *qatila*, i.e. after the opposition *qatala* (act.) : *qatila* (pass.) had been replaced by *qatala* : *qatila*.

The split within conj. II, viz. *iqṭalu/qatila* versus *iaqtalu/qatila*, and the function of the latter form as the passive of Ia (= active) entailed the replacement of *qatila* by *qatala* in the active conjugation Ib, i.e. a unification of Ia and Ib.

The type *iqṭalu/qatila*, differing from Ia both in the imperf. and in the perf., was untouched by this development which may be shortly described as an evolution of *trans./intrans.* to *act./pass.*

§ 15. But traces of intrans. *iaqtu/ilu* : *qatila* are still extant in historical West Sem. This archaism is an important proof of the old distribution of trans. *qatala* and intrans. *qatila*. Cf. Ar. *iaḥḍuru* : *ḥaḍira* 'be present'; *iaḥkunu* : *raḥina* 'lean upon, rely'; *iafḍulu* : *faḍila* 'be superfluous'; *ian'imu* and *ian'umu* : *na'ima* 'prosper'; *iaḥsibu* : *ḥasiba* 'consider'; *ia-dillu* : *dalla* (< *ḍalila*) 'err, go astray'.

There is also a series of intrans. verbs with  $R_1 = y$  and the vowel *i* both in the „imperf.“ and the „perf.“ : *yatiga*, *iatigu* 'trespass, sin'; *yatiga*, *iatigu* 'trust, rely'; *yarita*, *iaritu* 'be heir'; *yarima*, *iarimu* 'swell'; *yafiga*, *iafiqu* 'agree'; *yaliia*, *iali* 'be helpful'; *yamiga*, *iamiqu* 'love'. Similarly



*ḡaḡi'a* 'smart'; *ḡaḡida* 'be unique'; *ḡaḡira* 'be filled with rage'; *ḡaḡina* 'have a grudge'; *ḡaḡima* 'suffer from indigestion'; *ḡaḡiha* 'obey'.

The constant vocalism *i* of the „imperf.“ seems to be in connection with the irregular, hence subordinate character of the verbs with „mobile“ *ḡ*-. The vowel *a* is proper to verbs with  $R_2$  or/and  $R_3$  = „laryngeal“, or is the result of the adaptation of the vowel of the „imperf.“ to the „perf.“ *qatila* of intrans. verbs. But the form of the „perf.“ itself (*qatala* or *qatila*) depends only on the trans. or intrans. meaning of the verb. Notice that in Heb. this irregular verbal group (five forms) have preserved the vowel *i* (> *e*) in the „imperf.“ (*ḡālaḡ* : *ḡēleḡ*) — against the general tendency of replacing *i* by *u* in trans., by *a* in intrans. verbs. In the „perf.“ the old *i* of *qatila* is maintained if the *i* of *ḡaḡilu* has been replaced by *a* : *ḡā'ef* 'grow tired', „imperf.“ *ḡī'af*, *ḡā're* 'be afraid', „imperf.“ *ḡī'rā*.

In Heb. the verb „to die“ is an important trace of conj. Ib: *ḡāmūḡ* as against *mēḡ* (*ḡaḡtulu* : *qatila*). Ar. has innovated replacing *ḡāmūtu* : *mittu* by *ḡāmūtu* : *mittu* or by *ḡāmātu* : *mittu* (*ḡaḡtulu* : *qatala* or *ḡaḡtalu* : *qatila*). Akk. has *imūt*, *mītu*. Other examples are: Heb. *ḡaḡpōš* : *ḡāfeš* (besides *ḡēhpāš* in pausa) 'love, want'; *ḡibbōl* : *nāḡēl* 'wither'; *ḡā'amōl* : 'āmēl 'grow tired'; *ḡiškōn* : *šācheḡ* 'live'; *ḡiškōm* : *šāmēm* 'be desolated, deserted'; probably also *ḡā'ūr* : \**er* (< \**ayira*) 'be awake' <sup>7</sup>. Indirect proofs of *ḡaḡtulu* : *qatila* are perhaps West Sem. \**ḡanūru* 'shine' : \**na'ir* (presupposing a perf. \**na'ira*), and \**ḡagūru* 'settle, live' : \**ga'ir* (from \**ga'ira*), cf. Ar. *nāru*, *ḡāru* = Heb. *neḡ*, *geḡ*.

§ 16. Another important trace of the old distinction between conj. Ia and Ib is the split of the „imperf.“ of some primary verbs into *ḡaḡtulu* (intrans.) and *ḡaḡtulu* (trans.), e.g. Ar. *ḡaḡillu* 'be permitted' : *ḡaḡillu* 'release'. Since there are primary verbs which have both an intransitive and a corresponding transitive (causative) meaning, their „perf.“ may be either *qatila* (conj. Ib) or *qatala* (conj. Ia) according to the meaning of the „imperf.“. The relation is therefore.

	1)		2)
„perf.“	<i>qatila</i> — <i>qatala</i>	or	<i>qatila</i> — <i>qatala</i>
„imperf.“	<i>ḡaḡtulu</i>		<i>ḡaḡtulu</i>

The identity of vocalism *qatila* : *ḡaḡtulu*, carried over to 2), confines *ḡaḡtulu* to the trans. meaning. The split *ḡaḡtulu* / *qatila* (intrans.) : *ḡaḡtulu* / *qatala* (trans.) entails a parallel split in 1), i.e. the creation of trans. *ḡaḡtulu*.

<sup>7</sup> Cf. also Eth. *ḡengeš* 'reign' : *nagša*; *resen* (imperat.) 'burn' : *rasna*; *ḡenteb* 'drip' : *naḡba*; *ḡenfes* 'break down' : *naḡša*; *ḡedres* 'be perplexed' : *ḡarsa*. But compare note 5.

§ 17. As a rule, however, there is an overall tendency to replace the original perf. of conj. Ib *qatila* by *qatala*. Whereas Ar. continues this stage reached towards the end of the West Sem. unity, in Heb. the spread of *qatala* goes farther.

The historical state of the Heb. verb shows considerable innovations. The partial elimination of the forms *qatila* in the perf., *iaqtilu* in the imperf. is a morphological corollary of the phonetic change  $\epsilon > a$  in closed accented syllables. Cf.:

perf.				imperf.			
sing.	2 <sup>nd</sup>	p. m.	<i>kābādītā</i>	pl.	3 <sup>rd</sup>	p. f.	} <i>tešābñā</i>
"	2 <sup>nd</sup>	p. f.	<i>kābādīt</i>	"	2 <sup>nd</sup>	p. f.	
"	1 <sup>st</sup>	p.	<i>kābādītī</i>	but sing.	3 <sup>rd</sup>	p. m.	<i>iešeḇ</i>
pl.	2 <sup>nd</sup>	p. m.	<i>kābādītēm</i>	"	3 <sup>rd</sup>	p. f.	<i>tešeḇ</i>
"	2 <sup>nd</sup>	p. f.	<i>kābādītēn</i>	"	2 <sup>nd</sup>	p. m.	<i>tešeḇ</i>
"	1 <sup>st</sup>	p.	<i>kābādñū</i>	"	1 <sup>st</sup>	p.	<i>ʿešeḇ</i>
but sing.	3 <sup>rd</sup>	p. m.	<i>kābēd</i>	pl.	1 <sup>st</sup>	p. <sup>st</sup>	<i>nešeḇ</i>

The forms with zero-ending being founded on those with consonantal ending, the change  $\epsilon > a$  in closed syllables (= before consonantal endings) entails under certain conditions the replacement of  $\epsilon$  by  $a$  before the desinence zero.

§ 18. The ousting of *qatila* by *qatala* is evident. The former is preserved in a special position, viz. in *pausa*, e.g. 'āḥab 'love', 'āšam 'be guilty', 'lāḇaš 'be dressed', šāchan 'live' are the normal forms, the old forms 'āheḇ 'āšem, lāḇeš, šāchen appearing only before pause. Forms like *dāḇeqū* 'adhere' (3<sup>rd</sup> p. pl. before pause) or *šcheḥānī* 'he has forgotten me', with  $\epsilon$  in open syllable, are phonetic.

§ 19. In the imperf.  $\epsilon$  is preserved chiefly in irregular types like *iešeḇ* (but *tešābñā*) or derivatives like *iqqāṭel* (*iqqāṭalnā*). The forms *pi'el* and *hiḥpa'el* even substitute  $\epsilon$  for  $a$  in the 3<sup>rd</sup> and 2<sup>nd</sup> p. pl. f.: *iqattēlnā*, *tiḥqattēlnā*.

This is the reason why the vocalism  $a$  appearing in the imperf. of primary *trans.* verbs points to an original vowel  $i$ .

The successive elimination of the „imperf.“ vowel  $i$  by  $u$  in Heb. is evidenced by the verbs with  $R_1 = n$ . Verbs with the assimilation  $nR_2 > R_2R_2$  have still in the imperat. and in the construct infinit. the vowel  $i$ , whereas the recent layer with restituted  $n$  shows the vocalism  $u$ . Cf. *ten* 'give' (*nāḥan*), *š'eḇ* 'to lift' (*nāšā*), *teḇ* 'to give' beside the younger forms *nšp*, *nḥon*; *li-nṣor* 'guard', *li-nṭoq* 'to plant'. Cf. also *ielech*, but *iaḥlochéu* (with the restitution of  $h$ ) < *hālach* 'go'.

§ 20. The substitution of *qatala* for *qatila* created in Heb. a new type of intransitive conjugation: *iqtalu* : *qatala* opposed to *iqtu/ilu* : *qatala*

(representing both trans. and intrans. verbs). This contrast led to the replacement of intrans. *iqtu/ilu* by *iqtalū*<sup>8</sup>.

The final outcome of this evolution of the primary regular verb is therefore: trans. verbs *iqtulu/qatala* and *if'alu/fa'ala* ( $R_2$  and/or  $R_3$  = laryngeal); intrans. verbs *iqtalū/qatala*. All the other types may be considered residual. The chronological order implied is  $i(e) > a$ , then the replacement of  $a$  by  $u$  for trans. verbs. Cf. Ar. *iaħbisu* = Heb. *\*ieħbaš* (cf. *ieħbāš* in pausa)  $>$  Heb. *iaħ<sup>a</sup>bōš* „bind“.

The rearrangement of the inherited conjugation in Heb., where the „imperf.“ *\*iqtalū* may correspond to „perf.“ *\*qatila* or to „perf.“ *qatala*, makes us understand the curious structural differentiation of verbs with  $R_2 = R_3$ . The original state of affairs was represented by *iāšor* (trans.) and *iešar* (intrans.) having a common „perf.“ *šar* ( $< *šarra$ ). The restitution of a triconsonantal „perf.“ was possible only for *iāšor* (trans. verbs) because of the predictability of *qatala* as the „perf.“ of *iaqtulu*. Not so in the case of *iešar* whose „perf.“ was not predictable since it might have been either *qatila* or *qatala*. Hence *šar* remains as the „perf.“ of *iešar*, whereas a new form *šārār* is introduced as the „perf.“ of *iāšor*.

§ 21. The perf. *qatula*, subtype of *qatila*, is represented in Heb. by only a small number of specimens: *iāzortī* 'I am afraid', 2<sup>nd</sup> p. sing. m. *iāzortā*; *iāchol* 'he has been able'; *iāqōštī* 'I have laid snares'; *qātōntī* 'I am small'; *šācholī* (in pausa *šāchālī*) 'I am childless'. Some verbs *mediae infirmae* are less sure: *ōr* 'shine'; *bōš* 'be ashamed', *iōb* 'be good'. The vowel  $a$  of the corresponding imperf. (*iqtalū*; also in Eth.) is certainly older than the  $u$  of Ar. (*iaqtulu*) and of Syr.

In Ar. *qatula* developed its own conjugation, independent of *qatila*, viz. *qatula/iaqtulu* versus *qatila/iaqtalū*. It is just this differentiation of the types *qatula* and *qatila*, originally sharing a common imperf., which saved *qatula* from final decline. Although in many cases Ar. *qatila* and *qatula* are derived from the same verbal root and in some of them their semantic relation may be traditionally defined as *transient state (qatila) : permanent state or quality (qatula)*<sup>9</sup>, this opposition has become blurred<sup>10</sup>.

But even in Ar. there are still some residual imperf. with  $a$ -vocalism corresponding to perf. *qatula*, thus *ialabbu* 'be intelligent': *labubtu*; *iadammu* 'be ugly': *damumtu*; *iašarru* 'be wicked': *šarurtu* (verbs with  $R_2 = R_3$ ).

<sup>8</sup> A number of primary trans. verbs with primary  $i$  and secondary  $a$ -vocalism (due to  $e > a$  in closed syllables) join the chief trans. type *iqtul/qatala* (a part having been absorbed before by the *hif'il* class).

<sup>9</sup> E.g. „to have become something“ : „to be something“.

<sup>10</sup> Cf. also the secondary lack of distinction between „to be“ and „to become“ in instances like Ar. *kabura* 'be or grow big' etc.

The semantic split *ḡaqtalu* : *ḡaqtulu* corresponding to *qatila* : *qatula* was triggered by the ambiguity *ḡaqtalu* which could express either a *transient* state (primary function) or a *permanent* state (secondary function), or to put it in a rigorous form, was either intransitive-fientive or stative. It is the vocalism *u* which being a *secondary formant*<sup>11</sup> of the pret. of conj. II was charged with this *secondary function*. The Ar. emancipation of the imperf. of *qatula* was based on the vowel difference in the corresponding perf.:

$$\begin{aligned} & qatila : qatula = \dot{q}aqtalu : \dot{q}aqtulu \\ & (\text{since } i > u = i > a > u; \text{ hence } a > u, \text{ cf. chap. II } \S 17). \end{aligned}$$

§ 22. Two innovations of Ar., the replacement of *ḡiqtalu* (conj. II) by *ḡaqtalu* and the split of the latter form (*ḡaqtalu*, *ḡaqtulu*), may be responsible for the distribution of the corresponding infinitives, i.e. the most frequent *maṣḍar*-forms belonging to *ḡaqtu/ilu*, *ḡaqtalu*, *ḡaqtulu* (*qatula*):

Ia	<i>ḡaqtu/ilu</i>	transitive	:	<i>maṣḍar qatl</i>
Ib	"	intransitive	:	" <i>qutūl</i>
II	<i>ḡaqtalu</i>	transitive	:	" <i>qatl</i>
II	"	intransitive	:	" <i>qatal</i>
II'	<i>ḡaqtulu</i>	intransitive	:	" <i>qatālat, qutūlat</i>

The original distribution was Ia and Ib: *qutul*; II (*ḡiqtalu*) : *qital* (cf. chapter II § 43).

The introduction of *qatl* for *transitive* verbs was responsible for the split *qatl/qutul* in I, *qatl/qatal* in II (*qatal* for *qital* because of *ḡa-* for *ḡi-*).

The Ar. differentiation of II, *ḡaqtalu* (*qatila*) : *ḡaqtulu* (*qatula*), entailed the merger of *ḡaqtulu* of II' with intrans. *ḡaqtulu* of Ib, hence the *maṣḍar qutūl*.

Both the lengthening and the suffixation of *-at* in *qutūl(at)*, *qatālat* serve to underline the *abstract* value of the verbal noun.

§ 23. Perf. forms of concave verbs like Sem. \**qaḡala*, \**ṣaḡara* > *qāma*, *ṣāra* have in Ar. *u*, *i* (*qultu*, *ṣirtu*) etc. in closed syllables. In Heb. we find *qamī*, *bamī* etc. with the regular shortening of *ā* (stemming from contraction) to *ā*. The Ar. paradigm is the result of a structural merger of the types *qatila* and *qatala* in certain forms of the perf. E.g.:

	<i>qatila</i>	<i>qatala</i>
imperf.	<i>ḡaḡāfu</i> 'be afraid'	<i>ḡaṣīru</i> 'become'
perf.	* <i>ḡaḡīfa</i>	* <i>ṣaḡara</i>
	* <i>ḡaḡiftu</i> > <i>ḡiftu</i>	* <i>ṣartu</i>

<sup>11</sup> The primary formant being *i* (*qatila*). For primary and secondary form and function cf. above chap. II § 20.

The identification of the forms with open syllables (Ar. *aī* = *aīa* > *ā*) entailed the merger of the two perf. paradigms, hence *širtu* like *ḥiftu* etc.<sup>12</sup> The model *ṭayūla* : *ṭultu* became obligatory for verbs  $R_2 = \text{y}$ , therefore *iaqūmu* : *qāma/qumtu*. In Hebrew the type corresponding to \**ḥaīfa* is represented by *mēḥ* „die“ 1<sup>st</sup> p. sing. *mattī* etc.

§ 24. The personal verb of Heb. may have a double form depending on whether it is followed by a context or by a major juncture (end of sentence or of verset). E.g.:

I (before context)			II (before final juncture)		
„perf.“	sing.	3 <sup>rd</sup> p. m. <i>qāṭal</i>			<i>qāṭāl</i>
	„	p. f. <i>qāṭlā</i>			<i>qāṭālā</i>
	2 <sup>nd</sup>	p. m. <i>qāṭaltā</i>			<i>qāṭāltā</i>
	„	p. f. <i>qāṭalt</i>			<i>qāṭālt</i>
	1 <sup>st</sup>	p. <i>qāṭaltī</i>			<i>qāṭāltī</i>
pl.	3 <sup>rd</sup>	p. <i>qāṭlū</i>			<i>qāṭālū</i>
	1 <sup>st</sup>	p. <i>qāṭalnū</i>			<i>qāṭālnū</i>

Two forms of paradigm I, viz. *qāṭlā*, *qāṭlū*, look like proclitics. The syncope of the penult (cf. Ar. *qatalat*, *qatalū*) corresponds to the treatment of the noun in construct state. Now such a treatment of the personal verb could be expected only in the constructions *transitive verb plus direct complement*, the possibility of the cohesion of this group being suggested by the univerbation of the transitive verb with a pronominal complement.

§ 25.. We assume that in Sem. the transitive verb was directly followed by its nominal complement. The rigid word-order of Arabic: (personal) verb + subject + direct complement, is undoubtedly archaic, but notice that the nominal subject occurred after the verb only in the 3<sup>rd</sup> p., if at all. In all the other cases the subject was indicated by the verbal ending.

If the transitive verb formed an accentual unit with the following nominal complement, just as in the case of verb + pronominal suffix, then we would expect a treatment of the verb comparable to that of the noun occurring in the construct state. According to the rules of Heb. accentuation the addition of the personal suffix entails the syncope of the short vowel *a* of  $R_1$ , cf.:

	<i>him</i>	<i>her</i>	<i>you</i>	<i>you</i>	<i>me</i>
			(sing.	(sing.	
			masc.)	fem.)	
<i>he killed</i>	<i>qāṭlā-hū</i>	<i>qāṭlā-h</i>	<i>qāṭl-chā</i>	<i>qāṭl-ē-ch</i>	<i>qāṭlā-nī</i>
	<i>qāṭlō</i>				
	(contracted)				

<sup>12</sup>  $\bar{a} > i$  (*iaḥāfu* > *ḥiftu*), hence  $\bar{i} > i$  (*iasīru* : *širtu*);  $\bar{a} > i = (\bar{a} >) \bar{i} > i$ .

<i>she killed</i>	<i>qtālāp-hū</i> <i>qtālāttū</i>	<i>qtālāp-hā</i>	<i>qtālāp-chā</i>	<i>qtālāp-ē-ch</i>	<i>qtālāp-nī</i>
<i>you killed</i> (sing. masc.)	<i>qtaltā-hū</i> <i>qtaltō</i> (contracted)	<i>qtaltā-h</i>	—	—	<i>qtaltā-nī</i>
<i>you killed</i> (sing. fem.)	<i>qtaltī-hū</i>	<i>qtaltī-hā</i>	—	—	<i>qtaltī-nī</i>
<i>I killed</i>	<i>qtaltī-hū</i> <i>qtaltījū</i>	<i>qtaltī-hā</i>	<i>qtaltī-chā</i>	<i>qtaltī-ch</i>	—
<i>they killed</i>	<i>qtālū-hū</i>	<i>qtālū-hā</i>	<i>qtālū-chā</i>	<i>qtālū-ch</i>	<i>qtālū-nī</i>
<i>you killed</i> (plur.)	<i>qtaltū-hū</i>	—	—	—	<i>qtaltū-nī</i>
<i>we killed</i>	<i>qtalnū-hū</i>	<i>qtalnū-hā</i>	<i>qtalnū-chā</i>	<i>qtalnū-ch</i>	—
	<i>them</i> (masc.)	<i>them</i> (fem.)	<i>you</i> (plur. masc.)	<i>you</i> (plur. fem.)	<i>us</i>
<i>he killed</i>	<i>qtālām</i> (contracted)	<i>qtālān</i> (contracted)	—	—	<i>qtālā-nū</i>
<i>she killed</i>	<i>qtālāpām</i>	—	—	—	<i>qtālāp-nū</i>
<i>you killed</i> (sing. masc.)	<i>qtaltām</i> (contracted)	—	—	—	<i>qtaltā-nū</i>
<i>you killed</i> (sing. fem.)	<i>qtaltīm</i> (contracted)	—	—	—	<i>qtaltī-nū</i>
<i>I killed</i>	<i>qtaltīm</i> (contracted)	—	<i>qtaltī-chēm</i>	—	—
<i>they killed</i>	<i>qtālūm</i> (contracted)	<i>qtālūn</i> (contracted)	—	—	<i>qtālū-nū</i>
<i>you killed</i> (plur.)	—	—	—	—	<i>qtaltū-nū</i>
<i>we killed</i>	<i>qtalnūm</i> (contracted)	—	<i>qtalnū-chēm</i>	—	—

§ 26. In the combination *verb + nominal complement* the latter behaved like a *heavy suffix* (-*chēm* etc.), whereas the verb, deprived of its accent, became proclitic. The regular paradigm of a *transitive verb* followed by the nominal complement would be therefore:

## III

\**qtāl*  
*qālā*  
 \**qtaltā*  
 \**qtalt(ī)*

\*q̄altī  
q̄ātlū  
\*q̄altnū

The vowel *a* of *R*<sub>1</sub> is regularly preserved in the forms *q̄ātlā* and *q̄ātlū* owing to the syncope of *a* of *R*<sub>2</sub>. In all the other forms the *a* of *R*<sub>1</sub> is syncopeated, the *a* of *R*<sub>2</sub> being preserved in a closed syllable.

The proclitic paradigm of the transitive verb differed therefore from that of the intransitive verb which was regularly accented:

IV  
q̄ātāl  
q̄ātālā  
\*q̄ātāltā  
\*q̄ātālt(ī)  
\*q̄ātāltī  
q̄ātālū  
q̄ātālnū

§ 27. Once the rigid word-order had been given up, the forms of the transitive paradigm became accented on the last syllable. The pressure of the accented transitive on the intransitive paradigm led to a substitution of III for IV and to the following relation:

↓	IV	q̄ātāl	q̄ātālā	q̄ātāltā	q̄ātalt	q̄ātāltī	q̄ātālū	q̄ātālnū	↓
↓	III	q̄tal	q̄ātlā	q̄tāltā'	q̄talt	q̄tāltī	q̄ātlū	q̄tālnū	↓

In two forms, *q̄ātālā* : *q̄ātlā*<sup>13</sup> and *q̄ātālū* : *q̄ātlū*<sup>13</sup>, there is a shift of accent from root to ending and a concomitant syncope of the internal vowel *a*. Applied to the rest of the paradigm this relation transforms III to: *q̄ātāltā*, *q̄ātālt*, *q̄ātāltī*, *q̄ātālnū*, since the concomitant syncope is not applicable in closed syllables; *q̄tal* > *q̄ātāl* like in all the preceding forms.

§ 28. We thus get the paradigm I accented on the last syllable, regular when not followed by a final juncture. It became obligatory for intransitive verbs plus context whereas IV was restricted to forms *in pausa*. Hence the polarization *q̄atal* : *q̄ātāl* etc. with the introduction of *ā* into the closed syllables of paradigm IV. But the old accented *a* is still attested by the forms *q̄ātāltā*, *q̄ātāltī*, *q̄ātālnū* appearing before the caesura,—<sup><</sup>

The difference between I and II was proper to *intransitive* verbs or at least verbs used without direct complement, since a transitive verb used *in pausa* could scarcely be preceded by a nominal complement.

<sup>13</sup> The original forms must have been \**q̄atlā*, \**q̄atlū*. The vowel *ā* of the first syllable is the result of the pressure of *q̄ātālā* *q̄ātālū* triggered by the identity of III and IV when the syllable was closed, thus *q̄ittēlā*, *q̄ittēlū* : *q̄ittlā*, *q̄ittlū*.

In the „imperf.“ the relation of the forms *in pausa tiqṭōlā* (sing. 2<sup>nd</sup> p. f.), *tiqṭōlū* (pl. 3<sup>rd</sup> p. m.), *tiqṭōlū* (pl. 2<sup>nd</sup> p. m.) to the context forms *tiqṭī*, *tiqṭū*, *tiqṭū* corresponds exactly to *qāṭlā* : *qāṭlā* and *qāṭālū* : *qāṭlū*. The vowel of the first syllable of the „imperf.“, protected by the following consonant cluster, is maintained under all circumstances (before a pronominal suffix).

§ 29. The Heb. development was thus conditioned not only by the *inherited* syntactical cohesion between verb and direct complement, but also (and chiefly) by the laws of Heb. accentuation and syncope.

From the *synchronic* point of view the paradigm II is *secondary* in relation to I. Innovations start in I and penetrate into II. This fact explains e.g. the frequent preservation of *qatila* in II whereas I has already replaced it by *qatala* (§ 18).



## Chapter V. THE „ASPECTS“ OF THE SEM. VERB

§ 1. The work done up to now on this question has been extensive but certain tenets of general linguistics are liable to throw a new light on the problem.

In the first place we must keep in mind that there is „aspect“ inhering as a non-distinctive feature of tense-forms in every language. The present tense referring to the moment of speaking is by itself *imperfective* or *linear*, the pret. and the future are *by themselves perfective* or *punctual*<sup>1</sup>. The explanation of this fact is rather simple. The moment of speaking is the zero-point *included* by the grammatical present (the present tense) which may be arbitrarily extended to the left and to the right of the zero-point, i.e. into the *physical* past or future. Conversely, the grammatical preterite and future represent points included by the infinite of the *physical* past and future. But these tense-conditioned „aspects“ are not more grammatical than the fem. „gender“ of names of personal or animate beings of female sex.

Secondly the sense of the terms *imperfective* and *perfective* in the comparative grammar of the Sem. languages could be something else than their use in the classical sense when referring to Greek or Slavic, where neat oppositions can be established not only in the preterite, but also in the moods (imperat. etc.) and even in the nominal forms of the verb (infinitive, participles). One could, however, object, and rightly so, that the existence of an opposition is independent of its range. However small the range, its very existence is sufficient to found a grammatical category. But even if it were possible to establish a difference between *iaqtulu* and *gatala* within the same tense, i.e. referring to the same point of time, one would hesitate to call it an *opposition of aspect*, unless in another sense than in Greek or in Slav. grammar.

But in the third place oppositions between forms ought to be established in syntactical or/and semantic slots where they are not context-

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<sup>1</sup> An imperfective preterite or future cannot exist without a perfective counterpart.

conditioned (= where they are used in their primary function). An opposition between the primary function of a form  $F_1$  and a context-conditioned (secondary) function of another form  $F_2$  is not to the point.

§ 2. It would be an elementary error to speak of a *Common Semitic* verbal system since the functions depend on the number of the forms represented in the conjugational system. A system like *iaqtulu* (present) : *iaqtul* (preterite) : *qatala* (perfect), postulated for Western Sem. (chap. IV, § 1), or *iparras* (pres.) : *iprus* (pret.) : *iptaras* (perf.) of Akk., is something different from the binary system of Class. Ar. (*iaqtulu*, *qatala*) if we put aside „analytical“ constructions like *'anā kātibu*<sup>2</sup>. The reduction of the old conjugation is due to the fact that *iaqtul* has been ousted in its primary function (as pret.) by *qatala*, preserving only its modal function (as „jussive“), whereas (*lam*) *iaqtul* is only an allomorph of (*mā*) *qatala*.

§ 3. Let us first examine the binary system of Ar. The thing to do is to order the functions of *iaqtulu* and *qatala* by sorting out the context-conditioned ones as against the independent (primary) function. The methods of establishing the functions have been frequently faulty inasmuch as they did not correctly parse the meaning of the whole utterance (sentence) into its components attributable each to a member of the utterance.

Thus for instance H. Reckendorf (*Arab. Syntax*, 1921, p. 10—15), whose examples are quoted below, established the meanings of the Ar. „imperf.“ and „perf.“<sup>2</sup> in a purely empirical way, relying upon context and the German translation of the Ar. sentences. The multitude of meanings enumerated by Reckendorff must be reduced to a single opposition of the „total“ meaning („Gesamtbedeutung“) of the *positive* member *qatala* versus the *neuter-negative* member *iaqtulu*. As *neuter* member *iaqtulu* denotes *non-anterior*, as *negative* member, *simultaneous* action, whereas the *positive* member *qatala* has the total meaning *anterior* action. The total meaning (called also *value*) is an *abstraction* indispensable in establishing the system. Among the *concrete* meanings there is one which is *primary* („Hauptbedeutung“) against all the others which are *secondary* („Nebenbedeutungen“); the latter are context-conditioned.

§ 4. It is important to stress the following point: the above forms function primarily when related to the *moment of speaking*, secondarily when related to another (*past* or *future*) *moment*.

Primary function of the Ar. „imperf.“: present tense, action simultaneous with the moment of speaking; hence also general (habitual,

<sup>2</sup> For the sake of commodity we will continue to use the terms „imperf(ective)“ and „perf(ective)“ in quotation marks as designations for the morphological types *iaqtulu* and *qatala*, respectively, regardless of their semantic and syntactical functions.

iterative). e.g. *mā taʿalu* ‘what do you (put in) pawn?’; *ʾasmaʿu minka ḥadīṯan kaṯīra* ‘I hear from you much tradition’; *alladī ʾaʿlamu ssirra* ‘(God) who knows the secret things’.

The secondary function of *iaqtulu* as future (simultaneity with a future moment)<sup>3</sup> is of course to be expected, e.g. *ḡarituāhuuna ḡanūrituhā* ‘we have inherited them and we will them leave as legacy’. The same is true for the secondary function of *iaqtulu* as praesens historicum (simultaneity with a past moment). Just as in the case of the future *the tense is context-conditioned*, i.e. recognizable within a broader context (e.g. narration): *faʾamurru ʾalā šammara* ‘then I went across to Š.’ In *limā taqtulūna ʾanbiāʾa llāhi min qablu* ‘why did you kill God’s prophets before?’ the exponent of the past is an adverb of time.

§ 5. The most important secondary function of *iaqtulu* is therefore to denote *simultaneity* of an action with another action mentioned immediately before<sup>4</sup>. If the latter belongs to the past or to the future, *iaqtulu* necessarily also refers to the past or to the future. Yet it is simultaneity which is the pertinent semantic trait, to be accounted for by the fact that it is simultaneity which is inherent in the *value* of *iaqtulu*. E.g. *baʾata ʾilā muʾāḡiḡata iaṭlubu šsulḥa* ‘he sent to M. asking for peace’ (simultaneity is expressed by the part. in Engl.); *ḡaraḡa baina raḡulaini iaḡuttu riḡlāhu lʾarḡa* ‘he emerged between two men, his feet trailing along the ground’. But also with the „imperf.“ preceding the „perf.“: *ʾinnī laʾaḡūduhumā ʾid raʾāhu Bilālu* *maʾi* ‘I was leading both of them when B. saw him with me’. Future meaning as consequence of the preceding text: *ʾanā ʾabʾatu ʾilaika banaihi iakūnūna maʾaka fī rriḡāqi* ‘I am sending you (or I shall send you) his sons, (so) they will be with you in the tent’.

§ 6. The secondary use of the „imperf.“ as pret. creates a new opposition between *qatala* and *iaqtulu*, viz. that between a (past) action prior to the moment of speaking and a (past) action simultaneous with a past moment. It is only such a secondary opposition (primary function of *qatala* : secondary f. of *iaqtulu*) that is comparable to the Greek or Slavic aspect or to the opposition Lat. *scripsi* : *scribēbam*, French *jʾécrivis* : *jʾécrivais*, without being grammatical.

§ 7. Just like the present or future in other languages<sup>5</sup> *iaqtulu* is apt

<sup>3</sup> A formal future may be formed by prefixing the particle *sa* (*saiaqtulu*) or using the adverb *saufa*.

<sup>4</sup> Within a purely syntactical context the semantic context, viz. the *lexical meaning* of the verbs, is often responsible for imparting a final shade to the „imperf.“: *ʾarsalanī ʾataʾallamu minku* ‘he sent me in order that I may learn from him’; *inḡarḡa taʾkulūna min laḡmihā* ‘kill her in order that they may eat (from) her meat’.

<sup>5</sup> Cf. e. g. English *he speaks French*, or the use of *shall* and *will* both as exponents of tense (future) and modality.

to express shades of modality: 'a*jaqtulu*hu 'may he (has he the right to) kill him?'; m*ā* 'a*gra*'u 'what am I to (shall I) read?'; t*ada*'u 'i*bād*ata l'*autāni* 'thou shalt give up idolatry'; f*aqultu* i*atamannā* 'amīru lmu' minīna tumma 'atamannā 'I said: let the Caliph utter a wish, then will I utter a wish'. But it stands to reason that the choice between e.g. future and modality is regulated by the verbal context or/and the speech-situation. The real exponents of modality are context and situation, not *jaqtulu*. The latter is *neuter* as regards modality or is *negative* expressing in the first place *reality* (indicative) as against the other moods (subj., jussive).

In general the neuter character of *jaqtulu* as regards tense, mood and mode of action (e.g. iterativity) makes us look for the exponent of tense, modality etc. *outside the form jaqtulu itself*.

§ 8. The positive member of the opposition (the „perf.“) serves in the first instance to denote an action prior to the moment of speaking, i.e. a *past* action (*primary* function). It has *secondary* functions when relating to a past or a future moment: 'a'malu f*ih*i m*ā* 'amila f*ih*i rasūlu llāhi 'I did with it what the prophet had done with it'; l*ā* t*adkurū* š*š*i'ra ba'da m*ā* dafantum*u* lqayāf*ij*ia 'do not bear in remembrance poetry after you have buried the verses'.

A corollary of prior action is „result“, e.g. k*afarū* 'they are infidel' (= they have given up true faith); bi'tuka h*ādā* 'I sell it to you'; h*alaftu* 'I swear' <sup>6</sup> etc. The old value of *qatala* (chap. IV § 4) has become a secondary function in the historical West Sem. languages.

§ 9. Just as the neuter-negative *jaqtulu* the form *qatala* may have context-conditioned modal functions, expressing wish or irreality<sup>7</sup> in main clauses: 'atābaka mutīb*u*n 'may God (the „repayer“) repay it to you'; 'asarraka 'an 'ahru*ja* 'would you be delighted if I left?'.<sup>8</sup>

§ 10. The apparent durativity or iterativity of the „perf.“ is always a function of the context, not of the form itself: 'āl*ā* min nisā'i*hi* š*ahra*n 'he abjured his wives for a (whole) month'; kullam*ā* qāla dāl*ika* 'whenever he said it'. The exponents of durativity or iterativity are *šahra*n, *kullamā*.

§ 11. In conditional clauses expressing irreality the distinction between *jaqtulu* and *qatala* corresponds to the relation past tense: pluperfect of Engl. Fr. German etc. Cf. Reckendorff *op. cit.* p. 495 f.: i*ufaddūnani* lau i*astati*'ūna 'an i*afdu* 'they would ransom me if they could (ransom)', but lau š*ā*'a llāhu la*ja*'alakum 'ummata*n* y*ā*h*id*atan 'if God had willed, he would have made you a single people'. But there are hesitations in spite of the attempt to stress anteriority by the auxiliary *kāna* (+ *qatala*): lau *kāna* l*ja*'āfiru t*ā*u*a*'ūn*ī* lam i*adu*qi š*š*arāba 'if the J. had followed me,

<sup>6</sup> Cf. Engl. *sold!*, *agreed!* and so on.

<sup>7</sup> Cf. I. E. where the subjunctive stems from an old present, the optative from an old aorist, cf. The *Infl. Cat. of I. E.* p. 137.

they would not have tasted the drink'. Or (*kāna + iagtulu*): *lau kunta 'innamā tatlubu bidami 'utmāna lam tušrik mu'āwiya* 'if you had only wanted to avenge Othman's blood, you would not have become Mu'āwiya's accomplice'. But also: *lau kāna māli ġasa'u lidālika mā kallaftukumūhu* 'if my money were sufficient for that' I would not burden you with it'.

§ 12. From the standpoint of Class. Ar. the semantic relation „imperf.“ (*iagtulu*) : „perf.“ (*qatala*) may therefore be defined as a primary opposition (referred to the moment of speaking) between *non-preterite* and *preterite* entailing *secondary* (context conditioned) oppositions of *simultaneity* versus *anteriority* with relation to a past or a future moment. The secondary modal functions of the two members are also in agreement with the opposition *present* : *preterite*.

If referring to semantic function, the terms *imperfect(ive)* and *perfect(ive)* must be considered as *wrong*. The functions of *iagtulu* and *qatala* have nothing in common with the imperfective and perfective aspects. They may be rather compared to those of Lat. *infectum* : *perfectum* (*simultaneity* : *anteriority* with regard to the moment of speaking or a past or future moment)<sup>8</sup>. But it has been already mentioned above that there is no serious obstacle to using the terms „imperf.“ and „perf.“ when referring only to *morphological structure* (*iagtulu* and *qatala* respectively). The underlying *value* („Gesamtbedeutung“), however, is *non-anteriority* or *simultaneity* versus *anteriority*.

§ 13. The difference between Fr. *j'écrivais* and *j'ai écrit*, also partly that between Engl. *I was writing* and *I have written*, corresponds only superficially to Russian *ja pisal* (imperfective aspect) : *ja napisal* (perfective aspect). The Fr. or Engl. opposition is essentially one between *simultaneous with a past moment* : *prior to the moment of speaking*, whereas in Slavic we have to do, like in Greek (ἔγραφον : ἔγραψα), at the same time with *imperfective preterite* : *perfective pret.* The crucial distinction between certain imperfective and perfective moods (imperative) or infinitives, cf. Gr. γράφε : γράφον or γράφειν : γράψαι, does not exist in Fr. or Engl. nor does it in Sem. Therefore, whereas in Ar. the difference between *iagtulu* and *qatala* may in certain cases (just as in Fr. or Engl.) correspond to a difference of aspect in Slavic or Greek, *verbal aspect as grammatical category does not exist in Semitic*.

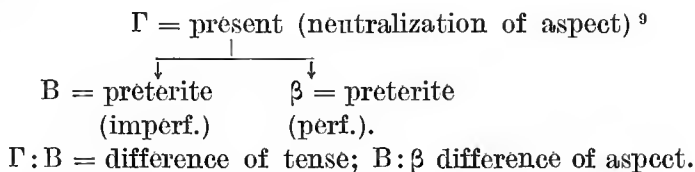
Genuine or classical aspect (*imperfective* : *perfective* or *linear* : *punctual* as in Greek or Slavic) is a category subordinate to the category *simultaneity* : *anteriority*. The relation *simultaneous with a past moment* : *prior to the moment of speaking*, i.e. a *deictic* difference becomes a distinction

<sup>8</sup> Called in German *Zeitbezug* 'time-reference'. German distinguishes between *perfektiv* referring to aspects in the Greek or Slav. sense, and *perfektisch* when speaking of anteriority, as in Lat., Engl. etc.

of semantic order. This is especially clear for the marked functions *perfectivity* (*punctuality*) and *anteriority*. The former (perfectivity) is an absolute semantic trait of the verbal form, the latter (anteriority) a relative one, being dependent on the point of time indicated by another verbal form or by context/situation.

The rise of the genuine aspect presupposes the *extension* of the secondary opposition *simultaneous with a past moment : prior to the moment of speaking* on all modal and nominal forms of the verbal paradigm, an extension creating a new opposition.

In general: the pseudo-oppositions between *iaqtulu* and *qatala* which may be established in order to prove the existence of the *grammatical* category of verbal aspect (*imperfective : perfective*), or even of the *grammatical* category of tense in Sem., are misleading and irrelevant if the system in question comprises only *two* members. The minimum required in order to prove the existence of these categories is three members. E.g. (Slavic):



§ 14. To consider the function of Ar. *iaqtulu*, *qatala* as a true reflex of their West Sem. value would be a rash conclusion. It seems that Class. Ar. is in this respect less archaic than the language of the O. Testament. Although owing to phonetic changes Heb. had lost the subjunctive, it preserved valuable traces of the old preterite function of *iaqtul* (agreeing with Akk. *iḫrus*) and of the old stative function of *qatila*, *qatula*.

The *primary* functions of *iaqtulu* : *qatala* are in Heb. the same as in Ar.: *iaqtulu* = non-preterite, *qatala* = preterite, their *values* being again *simultaneity* : *anteriority*. For examples cf. Gesenius *Heb. Gr.*, 1909, p. 319 ff.

*iaqtulu* = present: *ma-tḥaqqeš* 'what art thou looking for?'; *lo' ūchal* 'I cannot'; also iterative: *iaḥpōm lo' iṣṣoṭū ūrīb 'almānā lo'-iaḥbō' 'atēhem* 'they do not help an orphan to his right and the case of a widow does not come before them' (Isaiah I, 23); habitual: *lo'-iē'āsē chen* 'this is not done'.

*iaqtulu* = future (or modal): *'al-ken ia'azāb-'iš 'ēḥ-'ābīḥ ū'ēḥ-'immō* 'therefore will man leave his father and mother'; *ūhen lo'-ia'amīnū lī ūlo' iṣm'ū bqolī kī iḳ'mrū* 'if they do not believe me and do not listen to my voice, but say' (future meaning context-conditioned like in Engl.).

<sup>9</sup>  $\Gamma$   $\beta$  B are the symbols for the neuter, positive and negative members of the system, respectively. Cf. *Infl. Cat. of I. E.* pp. 19, 94.

§ 15. *Modal* uses of the „imperf.“ (will, obligation, potentiality etc.): 'āḥqol tō'chēl 'thou mayst eat'; 'asapper 'I can count'; mī-īp'mar 'who would say?'; lō' tīyūqōb 'thou shalt not steal'. In final clauses the „imperf.“ corresponds to the Ar. subjunctive: 'ašer lō' īišm'ū 'iš šfāp rē'ēhū 'lest no man understand the language of his neighbour'; ba'abūr tēda' kī 'ēn kāmōnī behāl-hā'āreš 'in order that thou know there is not the like of me in the whole world'.

§ 16. An important feature shared by Ar. and Heb. is the use of *iaqtulu* referring to a past moment. Its meaning may be compared partly to that of the Engl. past tense of the continuous (progressive) form, although it is due only to the fact that the tense is context-conditioned. Examples: u'ēd īa'elē min-hā'āreš 'was rising from the earth'; uhinne ṣsubbēnā 'alum-mōpēchem 'and behold, your sheaves were bowing'; lō'-īāmīš 'ammūd hē'āvān īōmām 'the column of cloud did not withdraw in day-time' (iterative); kāchā īa'asē 'īīqōb kāl haiīāmīm 'thus did Job every day' (iterative).

The same secondary function of *iaqtulu* may be exemplified by 'āz īāšīr-mōšē 'then M. (and the children of Israel) sang' (durative, with context-conditioned past tense)<sup>10</sup> as against 'āz hūhal liqrō' bšem īhōuā 'at that time one began to preach in the name of the Lord'. Other examples between the context-conditioned *iaqtulu* and the context-free *qatala* occur after the conjunction 'ad- 'until, while'. E.g. 'ad-šābū hāroḏ-fīm 'until the pursuers returned', but 'ad-īiqgom gōi 'oībāi 'until the people take vengeance upon their enemies' (= 'in order that ... may take vengeance...'), with secondary *modal* function of the „imperf.“.

§ 17. Compared with the „imperf.“ the „perf.“ (*qatala*) has a more restricted range of application. Besides its primary function (as preterite) the most outstanding meaning is the expression of *anteriority* of an action with reference to a past or future action (secondary function). Anteriority referring to a past action: uaiīšbōp ... mikkāl-mla'chtō 'ašer 'āsā 'and he ceased the work he had been doing'; šnaiim šnaiim bā'ū ... ka'ašer šīuā 'ēlohim 'they went in pairs ... as God had ordered'. Sometimes the context is broader, cf. 1 Sam. 28, 3 ušmū'el mēp 'but Samuel had died (was dead)': anteriority with reference to the preceding verset 28, 2 ('David said to Achis').

<sup>10</sup> Notice that it is not 'āz but a wider context which confers upon *iaqtulu* the meaning of a preterite. Cf. 'āz tīp'annay 'al-īhōuā 'then thou wilt take delight in God' (future). The use of the conjunction *bterēm* 'before' gives rise to a similar remark: *bterēm* hārīm hāfbā'ū 'before mountains were sunk (= planted)', but *ubterēm* īigrāb 'alēhem 'before he was (drawing) near to them'. Here again the conjunction is not the pertinent context responsible for the preterite meaning of *iaqtulu*, cf. e.g. Šal mā 'ē'ešē-lāch *bterēm* 'ēllāqah mē'immāch 'ask what I shall do for thee before I am taken away from thee'.

Anteriority referring to a future action: (*kī*) *lō* 'ē<sup>e</sup>zābchā 'ad 'ašer 'im-āšīpī 'ēp 'ašer-dibbartī lāch 'I will not leave thee until I have done what I have told thee'; *gam liymallēchā 'ēš'āb 'ad 'im-killū lištoḥ* 'I will also draw water for thy camels until they have finished drinking'.

The Heb. „perf.“ has in some cases still maintained the *old value* of *qatala* (= present or future *state* or *result*), e.g., among others, *ma-ggādēlū ma<sup>a</sup>šēchā* 'how great are thy works', *qāṭontī* 'I am small', *zāqantī* 'I am old', *iādā'tī* 'I know' (*iēda'* 'he apprehends'). The result of an action *immediately* preceding a certain moment (predominantly the moment of speaking) may be expressed also by *iagtulu*, e.g. *mē'aṣin tābō* 'whence doest thou come?' — 'ē-mizze bā'p, depending on the prominence of the action or of the resulting state. Cf. also *lō* 'ūchal lāqūm mippānēchā 'I cannot rise before thee', but *hiššiyūnī 'aḥonōḥai ylo'-iāchoḥtī lir'ōḥ* 'my wickedness has overtaken me and I cannot see' (result).

A similar situation arises in the case of the so-called *perfectum confidentiae* (cf. Engl. „I am lost “ etc.). This is only a corollary of the complex nature of the perfect (which is a secondary function of *qatala*) representing action plus following result or state implying preceding action. The difference between *iagtulu* and *qatala* may well in such cases be called *stylistic*.

But certain uses of the Heb. „perf.“ may well be called *perfective* in the classical sense, chiefly the so-called *perfectum propheticum*. A few preliminary remarks are necessary in order to assign it its proper place within the verbal system of Heb.

Genuine aspect is in Sem. a *tertiary* function of the verbal forms. The opposition between *iagtulu* referring to a moment of the past (secondary function of *iagtulu*) and *qatala* is interpreted as *imperfective* versus *perfective* action if an additional condition is fulfilled, viz. if *qatala* is used as a *narrative tense*, denoting an action simultaneous with a definite moment of the past (instead of an action prior to the moment of speaking). This tertiary relation *iagtulu* : *qatala* (*imperfective* past : *perfective* past) may be carried over into the sphere of the future since *iagtulu* may also have the secondary function of future (§4). Hence *iagtulu* = *imperfective* future, *qatala* = *perfective* future.

In this way both forms, *iagtulu* and *qatala*, may adopt secondary and tertiary functions, thus

	secondary functions	tertiary functions
of <i>iagtulu</i>	imperfectum	imperfective preterite
	futurum	imperfective future
of <i>qatala</i>	plusquamperfectum	perfective preterite
	futurum exactum	perfective future



Examples of perfective future (perfectum propheticum): *kī-īlēd īnullād-lānū ben nittan-lānū* 'a child will be born to us, a son will be given to us' (Isaiah IX 5); *brā'āb pādchā mimmaṣṣēp ūbmilhāmā mīdē ḥārēb* 'in famine he will save thee from death and in war from the hands of the sword' (Job V 20). Tense is context-conditioned. Example of perfective pret.: *'āz hūhal liqrō' bšem ihoṣā* (as against *'āz iāšīr-moše*), cf. *supra* § 16.

Two more remarks are necessary: 1) Since the perfective future is attested there must have also existed a context-conditioned perfective preterite. This is borne out by languages with genuine aspect. 2) The perfective shade can be of course rendered only in translations into such languages.

The context-conditioned use of the „imperf.“ and „perf.“ in conditional sentences (Gesenius *op. cit.* pp. 324 and 330) resembles strongly that of Ar. (§ 11): *gam kī-ēlēch byē' salmāṣṣēp lō'-irā' rā'* 'even if I wandered in a dark valley, I should not dread harm'; *lū ḥāfeš ihoṣā laḥamīḥenū lō'-lāqah miīādēnū 'olā* 'if God had wanted to kill us, he would not have accepted the holocaust from our hands'.

§ 18. We have seen (§ 13) that meanings rendered in other languages by tense or aspect appear in Sem. (West Sem.) as *context-conditioned functions* of the only pertinent opposition *non-anteriority (simultaneity) : anteriority* referred to the moment of speaking. Secondary functions are established by defining the direct or indirect (i.e. immediate or broader) contexts. They are actualized only if owing to the context *īagtulu* cannot be interpreted as a present or *qatala* as a preterite, i.e. in case of a contradiction between the primary function of the form (reference to the moment of speaking) and the context. It is the latter which is decisive. Secondary functions are much more numerous and varied for the unmarked *īagtulu* than for the marked member *qatala*.

One may, however, ask whether the minimal system *īagtulu : qatala* evidenced by Ar. has not been supplemented in Heb. by the *ya*-tenses („imperf.“ or „perf.“ with *waw consecutivum*).

§ 19. The type *īigtol* may be called, as regards tense, *enclitic*, the time of action being denoted either directly by the preceding verbal form (or its equivalent), or indirectly (by other contexts). A secondary function of *īagtulu*, viz. a very general syntactical subordination to the preceding verb, finds a formal exponent in the conjunction *ya-* of *yaīigtol*.

The occasional shortening of the last syllable in certain forms of the paradigm, characteristic of the type *yaīīigtol*, may be explained by *\*īagtul* which functioned in Protosem. as a preterite (cf. Akk.). It is probable that the form *\*īagtul* is continued by the Heb. *waw*-„imperf.“ with narrative function.

Opposition between the full and the shortened root-vocalism is present

only in a part of the paradigm (sing. 3<sup>rd</sup> p., 2<sup>nd</sup> p. masc., 1<sup>st</sup> p.; pl. 1<sup>st</sup> p.) and only in certain verbal classes (*hif'ıl* and some groups of weak verbs). Shortening is therefore only a *redundant* feature of the *waw*-„imperf.“.

§ 20. The *waw*-„imperf.“ denotes an action simultaneous with or ensuing from an action mentioned (generally expressed by a „perf.“) or inferred.

Referring to the present: *lācheu sāmah libbī uaijāyēl kbōdī* ‘therefore my heart rejoices and my dignity is triumphant’ (*sāmah* resultative); *uā<sup>a</sup>nī bḥummī tāmachtā bī uattasṣībēnī lfānēchā l’ōlām* ‘because of my integrity thou hast laid hold of me and thou settest me before thee for ever’ (the „perf.“ is resultative: „hold fast“).

Referring to past action: *uḥā<sup>a</sup>ddām iāda’ eḥ-hayyā ištō uattahar* ‘and Adam knew his wife Eve and she conceived’; *zāqen iṣṣāq uattichkēnā eṇāiō* ‘Isaac grew old and his eyes became dim’.

Referring to future action: *uaijāchšūluḥū alēmō lšōnām* ‘their own tongue will cause them to stumble’ (perfectum propheticum *hāiū* in the preceding verset); *kī-īlēd iullāḏ-lānū ben nittan-lānū uatthī hammiṣrā al-šichmō* ‘for a child will be born to us, a son will be given to us and the dominion will be upon his shoulders’ (following a perfectum propheticum).

§ 21. The *waw*-„perf.“ is formally determined, as regards tense, by the preceding verbal form, generally an „imperf.“ or its equivalent (e.g. the participle *qātīl*). Its value corresponds in the majority of instances to a secondary function of the „perf.“: state or result of previous action (corresponding to the function of the perfect in the classical sense). The relation between *qatala* and the preceding *iaqtul(u)* is often consecutive or final (*result*).

1) Tense = present, e.g. *bboqer iāsīs uḥālāf lā’erēb imōlēl uiaḏbēš* ‘in the morning it puts forth blossoms and is developed; in the evening it withers and is dried up’; *makke iṣ uāmeḥ* ‘if somebody strikes a man so that he is dead’.

2) Tense = pret. e.g. *u’ēḏ iā<sup>a</sup>le min-hā’āreš uḥiṣqā eḥ-kāl-pnē hā<sup>a</sup>ddāmā* ‘so that it had the whole earth soaked’; *uṇāḥār iōse’ me’ēḏen ... iippāreḏ uḥāiā l’arbā’ā rā’šīm* ‘a river came forth from Eden ... to be divided into four branches’; *umoṣe iqqah eḥ-hā’ōḥel unātā-lō miḥūš* ‘and M. took his tent to put it outside’.

3) Tense = future, e.g. *b’ōḏ šloṣeḥ iāmīm iṣṣā’ par’o eḥ-ro’šechā uah<sup>a</sup>šīb-chā al-kannēchā* ‘within three days will Pharaoh lift thy head to have thee restored to thy place’; *u’ēch e’ēse ḥārā’ā haggdōlā hazzoḥ uḥātāḥ pī le’loḥīm* ‘how shall I commit this great evil and be a sinner before God?’.

§ 22. The „enclitic“ use of the *waw*-„perf.“ is undoubtedly the original one. Notice that even infinitives could be used in this way as finite verbal forms, the tense being determined by the preceding „imperf.“ or „perf.“ E. g. Gen. 41, 43 *uaijarkēb oḥpō ... uṇāḥpōn oḥpō al kāl e’erēš miṣrāim* ‘and

he let him drive (in his carriage) ... and placed him in charge of the whole land of Egypt' (*nāḥōn* infinit.).

The independent or rather apparently independent use of the *waw*-„perf.“ is secondary. Its functions will be parallel to those mentioned above and fundamentally identical with the *secondary* semantic functions of the *waw*-less „perf.“

In actuality there always seems to exist a loose *semantic* connection between the *waw*-„perf.“ and the context. Thus if the form is used to announce future events (effects, results): *uqāmū šēba' šnē rā āb 'aḥārēhem uniš-kaḥ kálḥaššābā' b'ereš mišrāim* 'and seven years of famine will come afterwards and (= so that) all abundance in the land of Egypt will be forgotten'. The broader context (explanation of a dream) provides the time-frame, whereas the function of *qatala* is to describe the future event as accomplished (perfective), not as progressive (imperfective); *āmarti raq 'ēn-ir'aḥ 'elohim bammāqom hazze uaharāyūnī 'al-dḥar 'išti* 'I only thought there was no reverence of God in this place so they would kill me because of my wife'. The supposed cause („there is no reverence of God“) being present, the effect can be placed only in the future. The *waw*-form remains available for the expression of the tertiary function of *aspect*.

The *waw*-„perf.“ is also frequently used in commandments etc. the respective mood being closely related to the future (cf. Engl. *thou shalt not steal*). Like in the preceding instances the time-frame is supplied by the context. E.g. Deut. 10, 18 (*hā'el haggādōl*) 'ose mišpat ... u'ohēb ger ... u'ahabtem 'ēḥ-hagger '(a great God) who delivers justice ... loves the stranger ... (therefore) shall you love the stranger'; *h'chī-'aḥī 'attā u-'abadtanī himmām?* 'since thou art my brother shalt thou serve me gratuitously?' (present cause : future effect). — This apparently independent use of the „perf.“ -form provided with the conjunction *u-* is secondary in the same degree as e.g. Fr. *qu'il fasse* with the conjunction *que*.

The *waw*-perfect may also denote iterative action under the same conditions as the simple „perf.“ (iterativity of result or state): *uikhi lišlomō ... šnēm-'āšār 'elef pārašim — uchiḥklū hanniššābim hā'elle 'ēḥham-meleḥ...* 'Solomon had' ... 12.000 horsemen, and deputies kept the king supplied...'; *uḥāl-ḥaiiḥōḥ lō-'ia'amdū lfāndāḥō u'ēn maššil miḥādō u'āšā chirṣonō* 'no animal could withstand him and nobody could save from him, and (= so that) he did what he liked' (iterative).

Owing to its dependence on the context, the *waw*-„perf.“ is frequently used in the main clauses of temporal, causal and conditional sentences *when preceded by the respective subordinate clauses* (cf. Gesenius *op. cit.* p. 350 ff. for examples).

§ 23. The Heb. *waw*-tenses can be traced back to the so-called *hāl*-sentences characteristic of Sem., i.e. sentences expressing simultaneity

with a previously mentioned action. In Ar. they are 1) nominal or verbal; 2) as a rule introduced by *wa*. E.g. (see Reekendorf *op. cit.* p. 451—453): 'ahrujū sa'dar *wa* *hukya marīdu* 'they took S. out while he was ill' (cf. Anglo-Ir. „and him being ill“); 'adrukūka *wa* *hukum gīdābur* 'they reached thee being angry'; *rakiba wa* *ama'ahu silāhulu* 'he rode away, his weapons with him'; *qadima hurāsāna wa* *hukya hadītu ssinni* 'he came to Kh. while he was still young'. For *hāl*-sentences with the „imperf.“ cf. e.g. *marra bī mu'āyiatu wa'anā 'anzuru 'ilaihi* 'M. passed me while I was looking at him'.

Notice that owing to its ancient value of *present state* or *result* of previous action the „perf.“ may also appear in *hāl*-sentences (Reekendorf p. 450), e.g. 'anu'minu laka *wa* *attaba'aka l'ardālūna* 'are we to believe thee while rabble follows thee?'; *qawlu l'aš'ati li 'alījīn wa'atāhu* 'a word of A. to 'A. when he came to him'. Generally the „perf.“ is preceded by *qad* serving to change the preterite *qatala* into a perfect (denoting the result of a past action).

Heb. *hō'altī lāabbēr 'ēl-'ādōnāi wa'ānochī 'āfār wa'ēfer* 'I have ventured to speak to the Lord, being (only) dust and ashes'; *waichassū 'ēp 'urwaḥ 'abihēm ufnēhēm 'ahorannīp* 'and they covered the nakedness of their father, their faces (turned) backwards'. More frequently, however, the nominal sentence is represented by the present part.: *wa'īdābō'ū snē hammal'āchīm sdomā bā'erēb wlot ioseb bša'ar-sdom* 'two angels came to Sodom in the evening when Lot (was) sitting at the gate of Sodom'; *wa'īškāb 'immāh whi miḥqaddēšēp mittum'āpāh* 'and he lay with her, she being clean from her impurity'.

Constructions with participles seem to have provided the intermediate link between the nominal and the verbal *hāl*-sentences (> *wav*-tenses of Heb.). The old value of the conjunction *wa* of the *hāl*-sentences („and“) has undergone important modifications: when prefixed to an „imperf.“ following a „perf.“ it is predominantly *paratactic* („and“, „while“), whereas with a „perf.“ following an „imperf.“ it has developed a *hypotaetic* meaning. But the apparently sequential relation of the *wa*-„imperf.“ may also become a hypotaetic one, cf. the final shade of *wa* in Ar. *qultu d'ā wa'ad'uya* 'I said: „Call that I may call“, Reekendorf *op. cit.* p. 462.

§ 24. The definition of the Sem. morphological category *iaqtulu* : *qatala* as an expression of *non-anteriority* : *anteriority* instead of *imperfectivity* : *perfectivity* is based on general linguistic considerations (cf. § 1—2). To regard aspect as the *fundamental* conjugational category of the Sem. verb (and of any other verb) means overlooking the fact that the relation of the action expressed by the verbal form to the *moment of speaking* is the natural basis of every verbal system. Hence aspect must be subordinate to the most elementary expression of tense referring to the moment

of speaking. But if only two series of personal verb-forms are available (*iaqtulu* and *qatala* in the case under discussion) there is no place for a grammatical distinction of tense or aspect, only of *time-reference* („Zeitbezug“; *simultaneusness : anteriority*); cf. § 13.

Meanings corresponding to distinctions of tense etc., conveyed by translations into European languages, are *secondary* functions of *iaqtulu* : *qatala*, put to the fore only if the time-frame etc. is already imposed by the context. Besides the primary function (present : preterite) secondary ones of tense, aspect and even mood can be distinguished, putting aside other shades like iterativity, to be arranged in a hierarchical order. The contextual factors conditioning the secondary functions of the Sem. „imperf.“ and „perf.“ are easily found out by asking oneself: why do we in translating the O. T. render the form *iaqtulu* of a particular passage by an Engl. preterite, and *qatala* by an Engl. present or future in some other passage.

§ 25. The terminology of the Ar. grammarians denoting the forms *iaqtulu* and *qatala* is, although sophisticated, perfectly correct. The marked member (*qatala*) is defined by its primary semantic function as *māḏī* ‘past’. Since the semantic definition of the unmarked member (*iaqtulu*) could be only negative (non-past), they described it *structurally* as *mudāri* ‘resembling the noun’ (by its inflection, viz. the desinences -u, -a).

Besides the primary function („Hauptbedeutung“) and other functions („Neben-“ or „Sonderbedeutungen“) there is the „Gesamtbedeutung“ or *value* as the overall notion with the subordinate species: one with the privileged reference to the moment of speaking („Hauptbedeutung“), others with the reference to another point of time („Nebenbedeutungen“) <sup>11</sup>. It is not sufficient to identify „Hauptbedeutung“ with value and to consider the „Nebenbedeutungen“ as its different species, dispensing in this way with the notion of „Gesamtbedeutung“. Thus the „total meaning“ of *iaqtulu* is *non-anteriority/simultaneity*, its primary function is *present*, its secondary functions are *future*, *preterite*, *imperfectivity*, *modal functions*, *iterativity* etc. The functions of *qatala* correspond to those of *iaqtulu*. The former stands 1) for the *preterite* (anteriority with relation to the moment of speaking); 2) for the *pluperfect* or *second future* (anteriority with relation to a past or a future moment), *perfectivity*, *modal functions*, *iterativity* etc. In certain contexts it still preserves the etymological value of state or result of previous action.

§ 26. The above analysis takes into consideration only West Sem. and a relatively historical phase at that. The opposition *iaqtulu* : *qatala* is

<sup>11</sup> Cf. R. Jakobson *Travaux CLP* 6, 1936, p. 240 ff. (*Beitrag zur allgemeinen Kasuslehre*).

a consequence of the competition between the old preterite *iaqtul* (still alive in older West Sem., cf. Ugar. and the el-Amarna tablets) and the perfect *qatala*<sup>12</sup> which after having first restricted *iaqtul* to the function of a narrative (historical) tense ousted it nearly completely as preterite in the later phases of West Sem.<sup>13</sup>

The older system of West Sem. containing three members (*iaqtulu*, *iaqtul*, *qatala*) implied *tense*. The form *iaqtul* was primarily a narrative tense versus *qatala* with its primary function „anteriority“.

§ 27. In Akk. the representant of *iaqtulu* was menaced by a new form (*iaqattal*, *iparras*), originally denoting a continuous (progressive) present action (cf. § 5 and § 8 of chap. III), but gradually invading other semantic slots of old *iaqtulu*<sup>14</sup>. The latter was finally restricted to one of its secondary functions, becoming the so-called Akk. „subjunctive“. But the relation *iprus* („preterite“) : *iprusu* („subjunctive“) is an indirect proof of the former function of *iaqtulu* denoting also *simultaneity* with a past action.

As regards the old preterite (*iaqtul*) its competitor was again, like in West. Sem., a perfect though not one developed from the stative. The perfect *iptaras*, a specific creation of Akk. (chap. III, § 18) deprived *iprus* (*iaqtul*) of a part of its inherited functions, but unlike *qatala* in West Sem. did not threaten its existence. A semantic merger of *iptaras* and *iprus* is perceptible only in late Ass., with *iptaras* serving both as perfect („statement“) and as narrative tense („affirmation“), cf. the modern Fr. semantic merger of *j'ai écrit* and *j'écrivis*.

§ 28. The preservation of the old value of *parsáku* („stative“), both as regards its intrans.-pass. function<sup>15</sup> and its semi-nominal character (still on the threshold between nominal sentence and verb), is a remarkable archaism of Akk. The question, ought the Akk. stative be regarded, from the purely *descriptive* point of view, as a nominal sentence or as a conjugational form, reminds one of the similar status of the Lat. pass. perf. *amatus est*. The latter has undoubtedly a double function according to whether it is contrasted with *amatur*, *amabatur* etc. (personal verb) or with *bonus est*, *rex est* and so on (nominal sentences). But — and this point is decisive — there is a hierarchy between these two functions. Whereas *amatus* is a participle or a verbal adj., derived from the personal verb

<sup>12</sup> Stemming itself from the old „stative“, cf. chap. IV, § 2.

<sup>13</sup> It survives only in modal functions (jussive). Modal meanings of Akk. *iprus* (prohibitive after the negation *'ai*, precativ after the particle *lū*, etc.) were *secondary* functions of this form.

<sup>14</sup> Thus e.g. the expression of durativity or simultaneity, chiefly in subordinate clauses.

<sup>15</sup> No trace of the West Sem. type *qatala* although there are already instances of the active-trans. use of the stative.

in accordance with certain grammatical rules, *bonus* and *rex* have no such background. It is the opposition *amatur* : *amatus est* which makes us consider *parsáku* (< *iparras*, *iprus*) in the first instance as a *verbal form*, an obligatory member of the conjugation.

The *verbal* status of *parsáku*, subordinate to *iprus* etc., manifests itself in such details as the 3<sup>rd</sup> p. pl. masc. *parsû*, fem. *parsâ*, modelled on *iprus-û*, *iprus-â*.

This is the *primary function* of *parsáku*. The form may also be used in secondary function as a nominal sentence since *paris* has the secondary meaning of an adj. But to put the secondary (i.e. context-conditioned) function of *parsáku* and the primary function of *šarráku* („rex sum“) on the same level would be a methodological derailment tantamount to opposing a combinatory variant (secondary allophone) of one phoneme to the principal variant (chief allophone) of another phoneme.

From the standpoint of structural and functional linguistics the Akk. stative is fundamentally a *verbal (conjugational) form*.

## Chapter VI. DEVERBATIVE NOUNS AND ADJECTIVES

§ 1. The free use of an adj., under its masc. or fem. form, as *abstract noun* is a striking feature of Sem. as against I. E. where such possibilities are rather limited. Thus e.g. the deverbative adjectives *qatal*, *qatīl*, *qatūl* appear in Ar. also as abstracts. E.g. *īaḥlifu* 'swear': verbal abstract *ḥalifu<sup>n</sup>*; *īasriqu* 'steal': *sariqu<sup>n</sup>*; *īakdibu* 'lie': *kadibu<sup>n</sup>*. Such a secondary use of the adj. as abstract noun is of course accompanied by the simultaneous reduction of its paradigm since it is habitually *either* the masc. *or* the fem. form of the adj. which functions as the corresponding abstract (cf. chap. II § 20).

But the hierarchy *adj.* (masc. + fem.) → *abstract* (masc. *or* fem.) may be reversed. Any abstract derived from an adjective has a secondary, context-conditioned, concrete meaning, if it is used as an apposition, which as such may determine indiscriminately both masc. and fem. nouns. Hence the possibility of an appositional (then attributive) use of *any* abstract noun, primary or secondary. This peculiarity of Sem. is only a corollary of the secondary function of the adj. as (abstract) noun. Attributive function (as apposition) is frequent with abstracts of the form *qatl*, *qitl*, *qutl*, *qatāl*, *qatīl*, *qatūl* etc.<sup>1</sup> Cf. e.g. the type *qitl* (old abstract from the verbal adj. *qatīl*) used in Ar. on a large scale as epithet (adj.): *nijs* = *naḥīs* 'impure'; *ṣifr* = *ṣafir* 'empty, void'; *ṣirf* 'pure, unalloyed', etc.

§ 2. Examples of appositional function of abstracts: Ar. *bizuḥāḥḥatin mil'i liḍāini* 'with a glass filling both hands' (lit. „the filling of hands“), *al-kaukabu nnaḥsu* 'the star (of) calamity'; *al'umniiḥata ssaqama* 'unhealthy desires' (lit. „desires (of) malady“), besides the construction with the gen. of the abstract: *kilābu llu'mi* 'dogs of vulgarity', *alqamatu nnadā* 'generous 'Alqama' (lit. „A. of generosity“), *ḡamina ṣidqin* 'an oath of honesty'.

The appositional use of abstracts opens the way for a similar function of *mass nouns*. E. g. Ar. *alḡafnatu ššizā* 'the cup (made) of *šizā* (-wood)' *ḡabbatun lī ṣūfun* 'a cloak of mine (made) of wool', besides the expected construction with gen.: *buiḡutu rruḡāmi* 'houses (built) of marble', *misḡāku l'arāki* 'a toothbrush (made) of 'arāk(-wood)'. Hence also with nouns

<sup>1</sup> Sometimes, as in the case of *qatīl*, *qatūl*, such appositionally used abstracts become formal adjectives adopting *-at* (for the fem. gender) and pl. endings.



denoting things measured: *raṭlun zaitun* 'a measure (of) oil', *ṣarratan mi'ata dīnārīn* 'a purse (with) one hundred dīnār', besides *ziqqu ḥamrīn* 'a skin of wine', *ḥajju ḥilālīn* 'a tribe of sedentary peopled'. Cf. Reckendorf *op. cit.* pp. 68, 141 ff.

In Heb. both appositional use and gen. are attested for abstracts and mass nouns. Cf. *'amārīm 'emeḥ* 'words (of) truth', but *'aḥuzaḥ ḥālam* 'eternal possession' (lit. „possession for eternity“, construct state); *bim-ṣiltaiīm nḥōšēḥ* 'with cymbals (of) brass', but *klē keṣēf* 'vases of silver' (constr. state).

Akk. has e.g. *eqlam ṣibūtam* 'the desired lot' (lit. „the lot (of) desire“), but *ṣibūt ṣarratim* 'testimony of falseness' (constr. state), *kililum kaspum* 'crown (of) silver' as against *ṣalam tītīm* 'statue of clay' (constr. state).

Functionally the difference between *noun + adj.* and *noun + abstr.* would correspond to the contrast between normal attribute and an etymologically related apposition in other languages.

§ 3. This peculiarity of Sem. is in connection with the absence of neuter gender. In I. E. the substantival use of an adj. referring to something outside the text (not to a noun of the text) was either abstract (*bonum*) or personal (Lat. *bonus*, *bona*). But any of these forms could also become the name of a concrete impersonal object, e.g. Lat. *aureus* 'golden piece (of money)', though such semantic changes, frequent enough, represented as a rule a „condensation“ of special syntactical groups *adj. + noun*, i.e. a *lexical*, not a *grammatical* development.

The lack of neuter gender in Sem. entailed an ambivalence both of the masc. and the fem. forms of the adj. Thus e.g. the adj. *qatilu* was used as a subst., either abstract or denoting a person, *qatilatū* either as abstract or a personal fem. noun, putting aside the possibility of *lexical* developments mentioned above. Personal meaning was of course admissible only if the respective adj. could be applied to a personal noun.

But *within* the nominal function of the adj. there was a hierarchy, the personal use being only a sporadic or *tertiary* meaning of the adj. The abstract is nothing else than a simple *substantivation* of the corresponding adj. whereas the personal noun contains an *additional semanteme* (personal meaning). There is also a difference between the respective *ranges* of usage. Abstract meaning can be expressed both by the masc. and the fem. form of the adj. (although in practice one of them is chosen); on the other hand either of the personal meanings, masc. or fem., corresponds only to a part of the formal range of the abstract:

I		II		III
<i>adj.</i> (masc. form)	→	abstract	→	personal noun (masc.)
„ (fem. „ )	→	„	→	„ „ (fem.)

II is a secondary, III a tertiary function of I<sup>2</sup>.

§ 4. The use of morphologically characterized abstracts as syntactical determination (apposition or predicate) of a noun (chiefly personal) may impart them an adjective meaning. Cf. the forms *qatūl* : Ar. 'ajūl 'urgent', *kasūl* 'lazy, negligent', original abstracts, serve also as *feminine* adjectives. Similarly *kasīr* 'broken', *dabīh* 'killed, slaughtered', *rafīl* 'broken' (=abstract *qatūl*); *ṣanā'* 'skilled', *radāh* 'burdened' etc. (abstract *qatāl*). For other examples see Barth *Die Nominalbildung in den semitischen Sprachen* p. 46, 185 f., 40; for *qatāl* in Eth. cp. *infra* § 8.

Whereas a lexicalized term like *rakūbu<sup>n</sup>* 'mount' forms the fem. *rakūbatu<sup>n</sup>*, the form *qatūl*, originally an abstract, remains unchanged if used as apposition or predicate of a fem., e.g. 'imra'atu<sup>n</sup> ṣabūru<sup>n</sup> 'a patient woman' like raḡulu<sup>n</sup> ṣabūru<sup>n</sup>. On the other hand an abstract in -atu<sup>n</sup> may serve as apposition of a masc. noun: ḡuluqu<sup>n</sup> 'ādātu<sup>n</sup> '(the) usual nature', 'abū zubaidi<sup>n</sup> ḡiḡāratuhu 'A. Z. his favourite' (< his preference).

§ 5. The relation between adj. and the corresponding abstract implies the possibility of certain morphological changes. The renewal of the form of the abstract may render pertinent the secondary i.e. attributive function of the old form. This function becoming primary the old form is henceforth appreciated as an adjective and may adopt the morphological exponents of gender. But as long as the abstract noun does not undergo a formal renewal, a construction like Ar. imra'atun ṣidqun 'an honest woman' will be analysed by the speaker as *appositional*, impeding the agreement of gender viz. the creation of a special fem. form.

§ 6. New adjectives going back to abstracts provided with morphs of gender could successfully compete with the old adjectives. This is a frequent phenomenon in Sem., to be explained by the fact that the form of the abstract often contained an accessory morph, due to derivation, hence was more „expressive“ than the adj. In the case of semantic merger between the old and the new attribute it was the new form stemming from an original abstract noun which had the chance to be generalized. The most striking instance of such a development are the morphological types *qatīl*, *qatūl*, abstract nouns (from the verbal adj. *qatīl*, *qatul*) which became themselves adjectives via attributive function. The result of the semantic merger of *qatīl* and *qatūl* in the attributive slot was the spread of *qatīl* as (apposition >) *attribute* (the old function of *qatīl*). The form *qatīl* owes its success to the accessory morph „lengthening“ which made it from the phonetic point of view more „expressive“ (*qatīl* = *qatūl* + lengthening of *i*).

<sup>2</sup> Cf. Fr. I *rouge* → II *le rouge* (abstr.) → III *le rouge* (pers. e.g. „Indian“); *le rouge* „lipstick“ represents a further shift (sex → grammatical gender). Between II and III there is no difference of form in Fr., but there is one in Sp.: II *lo rojo*, III *el rojo*.

Preservation of *qatīl* besides the new form *qatīl* may give rise to a semantic differentiation, e.g. Heb. *ḥāmēṣ* 'sour' : *ḥāmīṣ* 'salty'; *qāṣēr* 'short' < *qā-ṣar* 'cut, mow' : *qāṣīr* '(reaped) corn'. In other cases the two forms are apparently synonymous: *īāṣeq* = *īāṣīq* 'tired'; *āḥeq* 'old, venerable' = *āḥīq*; *pāleṭ* 'fugitive' = *pālīt*.

§ 7. Original competition between *two different abstracts* functioning as appositions or nominal predicates and then as attributes, occurs e.g. in Ar. in the following categories:

- |                                |                                                                      |
|--------------------------------|----------------------------------------------------------------------|
| m. 'akbaru 'greater, greatest' | : f. <i>kubrā</i> (elative)                                          |
| m. 'aḥmaru 'red'               | : f. <i>ḥamrā'u</i> (colours and physical defects)                   |
| m. <i>sakrānu</i> 'drunk'      | : f. <i>sakrā</i> (cf. Aram. -ān: fem. -ē; < *-aiu (GVG I p. 412 f.) |

The right side represents a recent layer of appositions (attributes). The forms at left have *restricted them to the fem. gender*. The types *kubrā*, *sakrā*, *ḥamrā'u* are fem. only owing to their opposition to the corresponding masc. forms.

Appositions like *kubrā* etc. are more recent than 'akbaru etc. which have become simple attributes before the appearance of *kubrā* etc. The historical distribution is the result of a *syntactical merger* between *attribute* and *apposition*:

	primary function masc.	secondary function fem.
primary form (attribute)	'akbaru	*'akbaru
secondary form (apposition)	*kubrā	kubrā

The fem. form *kubrā* represents the association of secondary function with secondary form. It is *kubrā* that must be considered as the *secondary form* since in all cases where the syntactical merger has not taken place, the abstract *kubrā* is the marked member of the opposition *adj.* → *abstract*.

The vocalism *u* of the pl. *kubar* of the elative may perhaps be regarded as a proof of the originally epicene value of *kubrā*<sup>3</sup>.

When used as *comparative* 'aqṭalu serves for both genders and all numbers.

§ 8. Assignment of grammatical gender based on opposition is in Sem. a common enough phenomenon. Thus in Class. Ar. the old abstract *qatāl*,

<sup>3</sup> Besides being fem. adjectives the types *qutlā*, *qatlā'u* continue to function as abstracts, e.g. Ar. *nu'mā* 'welfare, riches', *ba'sā* 'bad luck, damage', *baḡdā* 'hatred'. Their fem. gender shows, however, that they must have been influenced by the forms with *attributive* function. The semantic development of -ā, -ā'u has been parallel to that of -atu (abstract > fem. adj.), cf. § 66.

used originally as apposition, becomes an adj., but is sometimes limited to fem. nouns, the corresponding masc. form being *qatīl* (by its origin another abstract), e.g. m. *razīn* 'composed, sedate': f. *razān*, or m. *ḥaṣīn* 'fortified': f. *ḥaṣān* 'chaste'. Rare in Ar., this relation becomes a rule in Eth., cf. m. *ṭabīb* 'skilled': f. *ṭabāb*, m. *raḥīb* 'wide': f. *raḥāb*, etc.

Restricted to the attributive function the Class. Ar. abstracts mentioned in § 7 are diptotic and take no nunation, two features which originally characterized proper names and *abstract nouns*, cf. *infra* chap. VII § 4<sup>4</sup>.

For another example of a secondary distinction of gramm. gender see numerals, chap. VII § 9 ff.

§ 9. The analysis of the morphological types *qatāl*, *qatīl*, *qatūl*, *qatl*, *qitl*, *qutl*, to which the next paragraphs are devoted, will be illustrated chiefly by the limited but reliable data of Heb.

But first some remarks about the fate of *qatīl*, *qatūl*, *qitl*, *qutl* in Akk. seem to be indicated.

Since within the Sem. conjugation the form *qatula* plays a secondary role in comparison with *qatila*, *fientive action* being primary as against state, the system *qatila/qatula* may be represented by the following scheme showing the subordination of the latter form:

<i>qatila</i>	→	<i>qatīl</i> (verbal adj.)	→	<i>qitl</i> (verbal noun)
↓ <i>qatula</i>	→	<i>qatul</i> „        „	→	<i>qutl</i> „        „

Derivative of a fientive verbal form, *qatīl* participates in the verbal value and may be considered as a participle. On the other hand *qatul* corresponding to a state easily becomes an adjective. Cf. the difference between '(being) big' and 'having grown big'.

This is evidenced by Akk. where often the form *paris* belongs to the conjugation (as the „permansive“ or „stative“ personal form) whereas *parus* remains as adjective outside the conjugational system. „Statives“ of the form *qatul* seem to be conditioned by the joint *u*-vocalism of present/preterite (*iparrus/iprus*).

Consequently *qutl* becomes an abstract noun (developing secondary concrete meanings) of the *adjective qatul*. But the form *qatīl* may also, when used attributively, develop a *secondary* function (of adjective). If so, it

<sup>4</sup> Outside the opposition *'aqtalu* : *qatlā'u* there are forms with *i* and *u* vocalism which take nunation and are masc., cf. *ḥirbā'u* 'male chameleon', *ḥizbā'u* 'stony region', *siḥuā'u* 'part (of the night)'; *ḥuḡā'u* 'kind of plant', *qūbā'u* 'lichen', *muzzā'u* 'kind of wine'.

In a similar way, outside the opposition *qatlānu* : *qatlā* the form *qatlānu* takes nunation (and is of masc. gender), e.g. *'armalū* 'widower', *nadmānu* 'drinking-companion'. The corresponding fem. has the suffix *-at*: *'armalatū*, *nadmānatū*.

merges semantically with the type *qatul* and may form the same abstract (*qutl*). Therefore the split between *qatil* with verbal value and *qatil* adjective produces a split in the derived abstract, *qitl* (verbal abstract = action noun) corresponding to the former, *qutl* (adjectival abstract) to the latter. E. g. Akk. *šittu* < *šin(a)tu* 'sleep' < (*u*)*ašānu* 'to sleep', whereas *šuttu* < *šun(a)tu* 'dream' is denominative, cf. Lat. *somnium* < *somnus* (the latter originally deverbative).

According to GAG p. 58 the type *pirs* forms deverbative abstracts, rarely adjectival abstracts (secondary function). The reverse relation applies to the type *purs*.

§ 10. The abstract *purs* as abstract derivative (with secondary concrete meanings) from both *parus* and *paris* (adjectives) is well attested in Akk. Cf.:

*aggu* 'angry' : *ugg(at)u* 'anger'; *ezzu* 'powerful; wrathful' : *uzz(at)u* 'wrath'; *baltu* 'alive, healthy' : *bultu* 'period of life'; *gapšu* 'strong, massive' : *gupšu* 'mass, multitude'; *dannu* 'strong' : *dunnu* 'strength'; *ḫalqu* 'perished' : *ḫulqu* 'ruin, loss'; *ṭahdu* 'abundant, exuberant' : *ṭuḫdu* 'abundance'; *kabru* 'thick, extensive, big' : *kubru* 'thickness, size'; *maršu* 'ill' : *mursu* 'disease'; *serru* 'treacherous, rebellious' (used as noun) : *sur-(ra)tu* 'treachery, rebellion'; *palḫu* 'timid, god-fearing' : *pulḫu* 'timidity'; *pašqu* 'burdensome; narrow' : *pušqu* 'narrowness; need'; *garḫu* 'strong, powerful' : *qurdu* 'strength, power'; *šalmu* 'whole, sound; peaceful' : *šulmu* 'health, welfare; peace'.

Since the types *qatil*, *qatūl*, originally also abstracts from *qatil*, *qatūl*, are often simply their functional successors (§ 6), a relation *qatil*, *qatūl* : *qitl*, *qutl* may also be expected.

Sometimes *purs* and *pirs* are both attested for the same root, either as synonyms or with a slight semantic difference. Genetically the former is denominative, the latter deverbative, although both are also used with concrete meanings. E. g. *gipšu* = *gupšu* 'multitude, great number'; *ḫimṭu* 'fire, flame, spark; light', but *ḫumṭu* 'heat, summer; name of the first month of the year'.

The type *qatl*, the most important verbal abstract in West Sem. (especially in Ar.), is relatively rare in Akk. Since the inherited verbal adjectives *paras* and *paris* merge in \**pars* (*parsu*, *parsi*, *parsa*) the distinction between their derivatives *parsu* and *pirsu* is also abolished, *pirsu* becoming the chief representative of the verbal abstracts both with trans. and intrans. verbs (cf. § 9).

§ 11. Let us now pass to the functions of *qatil*, *qatul*, *qitl*, *qutl* in the West Sem. conjugations Ia, Ib, II.

The types *qatal*, *qatil*, *qatul* functioned in West Sem. in the first instance as participles or verbal adjectives. Depending on conjugation

(Ia, Ib, II; cf. chap. IV § 5) they were „active“ or „passive“. In Ia *qatal* was act.-trans., *qatil* (*qatul*) pass.-intrans. In Ib and II *qatil* (*qatul*) was act.-intrans. But owing to the syncretism of the conjugations Ia and Ib in West Sem. both a secondary association of *qatal* with intrans. *ḡaqtilu/ḡaqtulu*, and also an active *qatil* (*qatul*) for trans. *ḡaqtilu/ḡaqtulu* may be expected.

In the second place one must count with the superposition of the more recent type of adj. with lengthened grade (*qatāl*, *qatīl*, *qatūl*), originally abstracts from *qatal*, *qatil*, *qatul*, tending to take the place of the latter. As a matter of fact *qatil*, *qatul* (replaced by *qatīl*, *qatūl*) are rather poorly represented in conj. I, *qatil* chiefly in its secondary function as verbal abstract (*maṣḍar*), cf. Ar. *saraqā* ‘steal’ : *sariqu<sup>n</sup>* etc., whereas *qatul* seems to have been totally ousted by the old inf. *qutul*. In the same way *qat ū* loses the contest with *qutūl* as verbal abstract.

§ 12. Heb. *qatil*, *qatul* are often called participles of conj. II (*ḡiqṭalu*, perf. *qatila*, *qatula*). It would be, however, more correct to define *qatil* as part. and *qatul* as verbal adj. This difference appears in Heb. in the following examples:

\**gādēl* ‘be great, big’ : part. *gādēl*, adj. *gādōl*, *gādōl* ‘great, big’  
*qārēḇ* ‘be near’ : part. *qārēḇ*, adj. *qārōḇ*, *qārōḇ* ‘near’  
*rāḥaq* ‘be distant’ : part. *rāḥeq*, adj. *rāḥoq*, *rāḥōq* ‘distant, remote’  
*tāḥer* ‘be clean, pure’ : adj. *tāḥor*, *tāḥōr* ‘clean, pure’  
*qādēš* ‘become sacred’ : adj. *qādōš*, *qādōš* ‘sacred’  
*gāḇah* ‘be high, tall’ : adj. *gāḇoqḥ* ‘high, tall’  
*šāḥar* ‘turn black’ : adj. *šāḥor* ‘black’<sup>5</sup>.

Possibly *ḡāḇōm* ‘orphan’ represents the same formation (\**ḡiatum*).

§ 13. To *qatil*, *qatul* belonged the abstracts *qill*, *qutl*, respectively.

The association between *qill* and *qatil* is direct, that between *qill* and the verb *qatila* indirect. Cf. the Heb. examples:

a) *’āḇel* ‘(being) in mourning’ : *’ēḇēl* ‘mourning’; *ḥāzeq* ‘strong’ : *ḥezēq*, *ḥezqā* ‘strength’; *’āmeq* ‘deep’ : *’emeq* ‘valley’; *tāfel* ‘tasteless’ : *tiflā* ‘un-seemliness’;

b) *ḥāfeš* ‘take pleasure in’ : *ḥefēš* ‘pleasure’; *šāmea’* ‘hear’ : *šema’* ‘opinion’; *šāfel* ‘become low, be humiliated’ : *šefēl* ‘low condition’, *šiflā* ‘humiliation’; *zāqen* ‘grow old’ : *zignā* ‘old age’; *ḥāḇēḇ* ‘be depressed, afraid’ : *ḥittā* ‘fright’; *ḡāre’* ‘be afraid’ : *ḡir’ā* ‘fright’; *šāme’* ‘be thirsty’ : *šim’ā* ‘thirst’; *qārēḇ* ‘draw near’ : *qirbā* (inf.); *šameaḥ* ‘rejoice’ : *šimḥā* ‘joy’.

With the verb *qatila* attested in Ar.:

<sup>5</sup> Because of the hesitation between full and defective writing in *gādōl* (with *waw* as mater lectionis) and *gādōl* etc., the above forms have been interpreted by Barth (*Nominalbildung* § 129c) as continuations of *qatāl* against Lagarde followed by Bauer and Leander, P. Joüon, Beer and Meyer, all of whom trace them back to *qatul*.

Ar. *ḥaṭī'a* 'to sin' : Heb. *ḥeṭ* 'sin'; Ar. *ḥaliqa* 'be smooth' : Heb. *ḥeḥeq* 'flattery', *ḥelqā* 'smoothness'; Ar. *yaṣī'a* 'be spacious, wide' : Heb. *yeša'* 'salvation'; Ar. *ka'iba* 'be depressed' : Heb. *k'eḇ* 'pain'; Ar. *rakiba* 'ride' : Heb. *richbā* 'riding'; Ar. *šamila* 'cover with a cloak' : Heb. *šimlā* 'cloak'.

§ 14. As regards *qutl* it is directly associated with *qatul*, indirectly with *qatula*, but more often, owing to the disappearance of the latter, with *qatila*:

a) 'ādōm 'red' : 'ōdēm 'red-stone (jewel)'; āroḥ, fem. 'arukkā 'long' : 'oreḥ 'length'; ḥāṣon 'mighty, well to do' : ḥoseṇ 'propriety, treasure'; ḥāšqoh 'dark' : ḥošqoh 'darkness'; ṭāḥor 'pure' : ṭohar 'purity', ṭāhorā 'purification'; māḥōq 'sweet' : moḥēq 'sweetness'; 'āmoq 'deep' : 'omeq 'depth'; 'ānoq 'dainty' : 'oneq 'exquisite delight';

b) Heb. *qāton* 'be insignificant' : *qōṭen* 'little finger'; Ar. *haduta* 'be new, young' : Heb. *ḥoḏeš* 'new moon'; Ar. *ḥamuḏa* 'be sour' (Heb. *ḥāmeš*) : Heb. *ḥomeš* 'vinegar'; Ar. 'aẓuma 'be strong, powerful' (Heb. 'āšem) : Heb. 'osem, 'āsmā 'force'; Ar. *qadusa* 'be sacred' (Heb. *qādeš*) : Heb. *qoḏeš* 'inviolability, sanctity'; Ar. *qašura* 'be short' (Heb. *qāšer*) : Heb. *qošeṛ* 'shortness, impatience'; Ar. *raḥuba* 'be wide, open' : Heb. *roḥaḇ* 'width'; Ar. 'aruma 'be ill-natured' : Heb. 'armā 'prudence'.

c) The relation *qatila* : *qutl* is moreover attested in:

Heb. 'āḥeḇ 'to love' : 'oḥaḇ 'object of love'; gāḏel 'be or become great' : goḏel 'greatness'; zāqen 'grow old' : zoqen 'old age'; ḥānef 'be impious' : ḥonef 'alienation (from God)'; ḥāseṛ 'be lacking' : ḥoseṛ 'want'; ṭaḥer 'be clean, pure' : ṭohar 'purity', ṭāhorā 'cleaning, purifying'; kāḇeḏ 'be heavy' : koḇeḏ 'heaviness'; nā'em 'be agreeable' : no'am 'bliss, grace'; sāḇe'a 'be sated, satisfied' : soḇa' 'satiety, abundance'; šāme'a 'hear' : šoma' 'renown, opinion'; ṭāme' 'be impure' : tum'a 'uncleanness'.

d) Relation *qatil* : *qutl*

Heb. 'āmen 'sure(ly)' : 'omen 'faithfulness'; 'āfel 'dark' : 'oḥel 'darkness'; ḥāzeq 'strong, violent' : ḥozeq 'power'; ḥāreḇ 'dry' : ḥoreḇ 'dryness'; ḥāreḇ 'waste' : ḥoreḇ 'desolation', ḥārbā 'ruins'; mrerā 'gall' (cf. Ar. *marra* < *marira*) : moṛā 'bitterness'.

The association *qatil/qutl* in Heb. is therefore as strong as in Akk. and suggests parallel East and West Sem. developments: *qutl* = denominative abstract (of *qatil*, *qatul*), *qil* = deverbative abstract (of *qatila*).

§ 15. Ar. seems to agree with Heb. in restricting *qil* to *qatila*, *qatula* whereas *qutl* belongs both to *qatil* and *qatul* (Barth *op. cit.*, p. 33, 35, 37). But being indirectly related (via *qatil*) to *qatila*, the type *qutl* may also become deverbative, though representing a more recent layer of verbal abstracts than *qil*. Finally, the fact that *qatil*, *qatul* (> *qatīl*, *qatūl*) function as passive participles (verbal adjectives) of conj. Ia (as active participles of conj. Ib) explains the connection of *qil*, *qutl* with *iaqtīlu*, *iaqtulu*. Cf. § 19 ff.

The function of *qutl* as denominative abstract in cases like the use of *qutl* as 'broken' pl. (< abstract) of the Ar. adjectives *'aqṭalu*, *qatla'u* (colours and physical defects) must be regarded as the result of a secondary association.

§ 16. As long as the perf. *qatila/qatula* was the rule in conj. Ib, *qatīl/qatul* and *qitl/qutl* must have shown the same distribution as in conj. II. After the substitution of *qatala* for *qatila/qatula* (chap. IV § 13) their place was taken by *qatal* and *qatl*, respectively. But the old derivatives *qatīl* (*qatul*), with active value for intrans. verbs (old Ib) and pass. value for trans. verb (Ia), have been normally preserved under the more recent form (§ 6) *qatīl* (*qatūl*).

The merger of conj. Ia and Ib in West Sem. explains the hesitation concerning the value of the verbal adj. and part. *qatīl*, *qatūl*. A difference between active and passive value exists of course only for trans. verbs (old conj. Ia). As a rule both *qatīl* and *qatūl* are in Heb. passive, the latter form functioning as the pass. part. in Heb., the former in Aram., whereas in Heb. *qatīl* forms *verbal adjectives*, mostly passive, rarely active, occasionally concrete substantives<sup>6</sup>.

Notice that the competition between *qatīl* and *qatūl* goes back to a remote period of West Sem. According to I. Gelb both forms functioned in Amorite as passive participles (*La lingua degli Amoriti* § 3.3.7.1: *ma-siḫum* 'anointed'; *rapū'atum* 'healed' fem.).

§ 17. The Heb. instances of *qatīl* ought to be subdivided according to conjugation. As a rule a „passive“ *qatīl* is to be expected for conj. Ia, an „active“ one for Ib and II.

Conj. Ia (passive): *'āsīr* 'prisoner'; *bāḥīr* 'chosen, elected'; etc. etc.; fem. *brī'ā* 'thing created, uncommon'; *hārīšā* 'something demolished'; *ḥālīšā* 'exuvia'.

For the difference between the part. *qatūl* and the verbal adj. *qatīl* cp. *'āsūr*, *bāḥūr*, *hārūs*, *ḥālūs*.

Conj. Ib (active): *nḥiraim* 'nostrils' (cf. Ar. *ṯanḥīru*); *pālīt* 'fugitive' (cf. Ar. *ṯaflūtū*, Heb. *ṯaflēt* proper name); *šāfir* 'buck' (cf. Ar. *ṯaḏfiru*); *tāmīm* 'whole' (cf. Ar. *ṯatimmu*).

Conj. Ia (active): *'arīš* 'powerful, tyrannical' < „terrifying“ (cf. Ar. *ṯa'riṣu*); *pāqīd* 'commissioner' (Ar. *ṯaḏqīdu*, Akk. *ipqīd*). Such traces of

<sup>6</sup> The original *abstract* value (as action noun), both of *qatīl* and *qatūl*, is still attested in secondary functions or is completely lexicalized: *'āsīf* 'fruit-gathering' (< *ṯosef*); *ḥālīchā* 'march' (< *ṯeṣeḥ* 'to march'); *ḥāl* 'profanation' (cf. Ar. *ṯaḥillu*) etc.; *qatūl* mostly enlarged by (Heb.) -ā or -īm: *mlūchā* 'kingdom' (< *ṯimloḥ*); *'azūbā* 'departure' (< *ṯa'azōb*, Ar. *ṯa'zubu*); *'asūqīm* 'oppression' (< *ṯa'soq*); *pqūdīm* 'orders' (< *ṯifqōd*); *ṯuqā* 'casting (of metal)' (< *ṯiṣṣoq*); *qbūrā* 'interment' (< *ṯiqbor*, Ar. *ṯaqburu*); *qbūšā* 'gathering' (< *ṯiqboš*); *šfūṯīm* 'judgement' (< *ṯiṣpoṯ*).



active meaning of *qatīl* have undoubtedly to be attributed to the analogy of conj. Ib.

Conj. II: *bārī* 'fat'; *gūr* 'lord' (*gāber*); *hāmīš* 'rumex' (*hāmēš*); *īāzī'a* 'tired' (*īāzeq'*); *īāhīd* 'unique' (cf. Ar. *yaḥida*); *ksīl* 'stupid' (cf. Ar. *kasila*); *nā'im* 'pleasant, delightful' (*nā'em*); *šā'ir* 'young, little' (cf. Ar. *ṣagira*).

In some cases the underlying perf. is *qatula*, e.g. *hāsīn* 'strong, powerful' (\**hāson*); *kābīr* 'great, powerful' (cf. Ar. *kabura*); *āpīd* 'ready' (cf. Ar. *atuda*); *āpīq* 'ancient, venerable' (cf. Ar. *atuqa*).

§ 18. The form *qatūl* has become the normal pass. part. in conj. Ia. In conj. II it is a verbal adj., cf. *'āmūn* 'trustworthy' (Ar. *'amuna*); *'ānūš* 'incurable' (Akk. *enēšu* 'grow weak'); *'āšūm* 'strong, powerful' (Ar. *'azuma*); *'ārūm* 'cunning' (Ar. *'aruma*); *āpūd* 'ready' (Ar. *atuda*); *šāchūl* 'childless' (*šāchoḷ*, Ar. *takula*); *bātūaḥ* 'confident'.

Whereas a form like *ātūf* originally belongs to Ib (intrans.), the active value of *harūš* 'cutting, threshing instrument' is difficult to explain; it looks like the pass. participle which is also attested.

§ 19. The (partial) replacement of *qatīl*, *qatul* by *qatīl*, *qatūl* in conj. Ia and Ib led to a secondary morphological relation between *qatīl*, *qatūl* and *qīl*, *qul* respectively. There is no genetical interdependence between the vocalism *i*, *u* of *qīl*, *qul* and that of the root-vowel *i*, *u* of the imperf. of conj. Ia and Ib. There is one between the verbal adjectives or participles *qatīl*, *qatūl* and the abstracts *qīl*, *qul* respectively, against Barth who assigns *qīl* to *īaqtilu*, and *qul* to *īagtulu*<sup>7</sup>. There may have been a chronological difference between the direct association of *īaqtilu*/*īagtulu* with *qīl* and that of *īaqtilu*/*īagtulu* with *qul* because of the more verbal character of *qatīl* as against the more nominal semantic function of *qatūl*.

At any rate the relations *īaqtilu* : *qīl* and *īagtulu* : *qul* presuppose the existence of the intermediate types *qatīl*, *qatūl*, whether attested or only potential. E.g. Ar. *īahdīqu*, inf. *hīdqu*<sup>n</sup> 'be skilled' besides the inf. *hādīqu*<sup>n</sup>; *īafsiqu*, inf. *fīsqu*<sup>n</sup> 'lead a lecherous life' : *fasiqu*<sup>n</sup> 'dissipated, debauched'; *īamlīku*, inf. *mīlku*<sup>n</sup> : *malīku*<sup>n</sup> 'king'; *īahriṣu*, inf. *hīrṣu*<sup>n</sup> 'desire, covet' : *harīṣu*<sup>n</sup> 'greedy, covetous'; *īahqīdu*, inf. *hīqdu*<sup>n</sup> 'harbour a grudge' : *haqī-*

<sup>7</sup> Such a relation could have been only the result of a secondary development. At any rate statistics shows that the exceptions to Barth's rule are too numerous. In the Ar.-German dictionary of Wahrmund *qīl* goes 262 x with *īaqtilu*, 170 x with *īagtulu*; *qul* 131 x with *īaqtilu*, 260 with *īagtulu*. We have to do not with synchronous derivatives (*īaqtilu* > *qīl*; *īagtulu* > *qul*), but with the competition of an older *qīl* with a more recent *qul*, and a partial selection of forms agreeing with the vocalism of the „imperf.“. This is evidenced by „imperf.“ forms with double root-vocalism, e.g. *īabšuru* 'bring good news' : *bušru*<sup>n</sup> 'good news', but *īabšīru* 'to rejoice' : *bišru*<sup>n</sup> 'joy'; *īakfuru* 'be impious' : *kufru*<sup>n</sup> 'unbelieving, impiety', but *īakfīru* 'cover' : *kīfru*<sup>n</sup> 'obscurity'.

*datu*<sup>n</sup> 'hate, grudge'; — *iaškuru*, inf. *šukru*<sup>n</sup> 'thank' : *šakūru*<sup>n</sup> 'grateful'; *iašfuru*, inf. *kufuru*<sup>n</sup> 'be impious' : *kafūru*<sup>n</sup> 'impious'.

Examples like *iasriqu*, inf. *sariqu*<sup>n</sup> 'steal' etc.<sup>8</sup> prove that the form *qitlu*<sup>n</sup> of the inf., being a derivative of *qatilu*<sup>n</sup>, is at the same time the successor of the latter.

§ 20. In conj. Ia *qutl* is a direct derivative of *qatūl*. Since *qatūl* is the pass. part. both of *iaqtulu* and *iaqtulu*, *qutl* is independent of the root-vocalism of the basic verb, though it stands in indirect relation to the latter. Hence the occasional value of *qutl* as action noun, concrete meanings being more frequent.

Conj. Ia. Relation *iaqtulu* : *qutl* (resulting from *iaqtulu* > *qatūl* > *qutl*)

<i>ie'esof</i> 'gather, harvest'	<i>'osef</i> 'gathering'
<i>iađoq</i> 'crush, grind'	<i>đoq</i> 'something thin'
<i>isbol</i> 'bear'	<i>soḃel</i> 'load, burden'
<i>iašoḃh</i> 'cover'	<i>soḃh</i> , <i>sukkā</i> 'covert, lair'
<i>ia'anoš</i> 'to fine'	<i>'oneš</i> 'fine'
<i>ia'ašor</i> 'restrain'	<i>'ošer</i> 'restraint, oppression'
<i>ia'ašoq</i> 'oppress, extort'	<i>'ošeḡ</i> , <i>āšqā</i> 'oppression, extortion'
<i>iašūd</i> 'devastate'	<i>šōđ</i> 'devastation'
<i>ia'aqoḃ</i> 'beguile'	<i>'āqḃā</i> 'insiduousness'
<i>išmōr</i> 'watch'	<i>šāmra</i> 'guard, watch'
<i>išpoḃh</i> 'pour'	<i>šāfehā</i> '(urethra >) male organ'

Relation *iaqtalu* : *qutl*

<i>iz'al</i> 'loathe'	<i>go'al</i> 'loathing'
<i>if'al</i> 'make'	<i>po'al</i> 'work'
<i>išhađ</i> 'give a present'	<i>šoḡađ</i> 'present'

Relation *iaqtulu* : *qitl* (resulting from *iaqtulu* > *qatūl* > *qitl*)

<i>iažoz</i> 'shear'	<i>gez</i> , <i>gizzā</i> 'fleece'
<i>izkor</i> 'remember'	<i>zeḡer</i> 'mention'
<i>iaḥloq</i> 'make smooth'	<i>ḡeḡeḡ</i> , <i>ḡeḡā</i> 'smoothness'
<i>iaḡor</i> 'search'	<i>ḡeḡer</i> 'searching'
<i>ittol</i> 'lay upon'	<i>neṡel</i> 'load, burden'
<i>isbol</i> 'bear'	<i>seḃel</i> (cf. <i>supra</i> <i>soḃel</i> ) 'load, burden'
<i>išpor</i> 'write'	<i>sefer</i> , <i>siḡra</i> 'writing, scroll'
<i>ia'aḡor</i> 'pass through, cross'	<i>'eḡer</i> 'side, bank'

<sup>8</sup> Cf. *qatil* as abstract (masdar) in II: *ḡaniqa* 'enter' : *ḡaniq*; *ḡahika* 'laugh' : *ḡahik*; *la'iba* 'play' : *la'ib* etc.; in Ib: *ḡalafa* 'swear' : *ḡalif*; *ḡaraṡa* 'pedere' : *ḡarit*; *ḡadaba* 'lie' : *ḡadib*, etc. Hence also in Ia: *saraqa* 'steal' : *sariq*.

<i>ia<sup>a</sup>roch</i> 'set in layers, rows'	<i>'erçeh</i> 'layer, row'
<i>išbor</i> 'break'	<i>šəber</i> 'breaking, fracture'
<i>ia<sup>a</sup>zor</i> 'help'	<i>'ezrâ</i> 'assistance, help'

 Relation *iaqtalu* : *qitl*

<i>iiftah</i> 'open'	<i>pəpāh</i> 'opening, entrance'
<i>iipqā</i> 'blow (an instrument)'	<i>təqa</i> 'blast of horn'
<i>ieheraf</i> 'reproach'	<i>herfā</i> 'reproach, contumely'

 § 21. Conj. Ib. Relation *iaqtulu* : *qutl* (*iaqtulu* > *qatūl* > *qutl*)

<i>iē<sup>er</sup>ōb</i> 'lie in ambush'	<i>'orēb</i> 'ambush'
<i>iā<sup>o</sup>z</i> 'be strong'	<i>'oz</i> 'strength'
<i>ia<sup>a</sup>mođ</i> 'stand'	<i>'omeđ</i> '(standing-) place'
<i>iittom</i> 'be complete'	<i>tom</i> 'completeness'
<i>iahmol</i> 'have compassion'	<i>humlā</i> 'compassion'

 Relation *iaqtalu* : *qutl*

<i>išsar</i> 'be straight'	<i>iōšer</i> 'straightness'
<i>iiggah</i> 'shine'	<i>nozah</i> 'brightness'
<i>iē<sup>o</sup>šar</i> 'become rich'	<i>'ošer</i> 'riches'
<i>iirgaz</i> 'quake, be excited'	<i>rožez, rāzzā</i> 'excitement, agitation'
<i>iēhkam</i> 'be wise'	<i>hāchmā</i> 'wisdom'

 Relation *iaqtulu* : *qitl* (*iaqtulu* > *qatīl* > *qitl*)

<i>iah<sup>a</sup>lof</i> 'come by turns'	<i>helēf</i> '(in) return (for)'
<i>iippol</i> 'fall'	<i>nefel</i> '(dropping >) miscarriage'
<i>iispoq</i> 'suffice, abound'	<i>šefeq</i> 'plenty'
<i>iārom</i> 'grow full of worms'	<i>rimmā</i> 'maggot'

 Relation *iaqtalu* : *qitl*

<i>iibtah</i> 'be reliant, trust'	<i>biṭhā</i> 'confidence'
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The „imperf.“ *iigtal* of conj. Ib is an innovation of Heb., cf. chap. IV, § 20.

Owing to the rarity of the conjugational type *iaqtulu*, only few examples of *iaqtulu* : *qitl* are attested:

<i>iō<sup>o</sup>mēr, iō<sup>o</sup>mar</i> 'say'	<i>'emēr, 'imrā</i> 'word, saying'
<i>iēleçh</i> 'go'	<i>heleçh</i> 'going; flow'
<i>*iışer</i> 'form, shape'	<i>iēşer</i> 'form, framing'

§ 22. Since the types *qitl* and *qutl* stem from *qatīl*, *qatul* and their successors *qatīl*, *qatūl*, hesitations between *qitl* and *qutl* must be put to the account of *qatīl*, *qatūl*, viz. to their competition. It is clear that a verbal

abstract may be derived either from a participle or from a verbal adj. Cf. the Slav. action nouns in *-tje*, i.e. either in *-tje* or in *-ntje*, depending on the pass. part., e.g. *pitiye* 'drinking' < *piti*, but (*sz-*)*branije* 'assembling' < *-branaz*.

In conj. Ib both *qatıl* and *qatıl* were active (though intrans.), in conj. Ia passive. But this difference was irrelevant since action nouns, liable to be determined both by the objective and the subjective genitive, are insensitive to voice.

§ 23. In Heb. where the vowel *i* has become exceptional in the „imperf.“ of conj. I, the type *qıl* is not less numerous than *qutl*. This fact proves the independence of *qıl/qutl* from the vocalism of the basic verb.

From the *historical point of view* the only way to explain the type *iisbol* 'bear': *səḇel* 'load, burden' (besides *səḇel*) is to assume an intermediate *\*sāḇel* (or *\*sāḇel*) which would directly account for the inherited transformation (*iaqtulu* >) *qatıl* > *qıl* (or *qatıl* > *qutl* in the case of *səḇel*). The disappearance of the missing link *\*sāḇel* does not of course mean the rise of a new complicated type of ablaut zero/*i* + *u*/zero (as in *iaqtulu* : *qıl*). In order to prove this we would be obliged to show that the instances of *qıl* preserved in Heb. are, at least partly, not residues of the old relation *qatıl* : *qıl*, but represent a new *productive* relation *iaqtulu* : *qıl*.

§ 24. In the Ar. conj. I the type *qıl*, in opposition to the fundamental *maṣḍar qatıl*, has been restricted chiefly to secondary, i.e. concrete meanings: *ḡarsu* 'sounding' : *ḡirsu* 'sound, tone'; *ḡamlu* 'carrying' : *ḡimlu* 'load'; *saṭru* 'veiling' : *sitrū* 'veil'; *saḡiū* 'watering' : *siḡiū* 'water (for drinking or irrigation)'; *faṭqu* 'separating' : *fiṭqu* 'part'; *qaṣmu* 'apportioning' : *qiṣmu* 'part'.

§ 25. In Ar. both *qatıl/qatılat* and *qatıl/qatūlat* are used in conj. Ia as verbal adjectives, the former being chiefly active, the latter passive. But Ar. still preserves the old abstract nouns *qatıl*, *qatıl* in secondary function as appositions which are insensitive to the distinction of gender and compete with the adjectives *qatıl/qatılat*, *qatıl/qatūlat*. This secondary layer of attributively used abstracts is of course justified only in the case of a semantic difference as against the old one, e.g. *qatıl/qatılat* (active) : *qatıl* (pass.), or *qatıl/qatūlat* (pass.) : *qatıl* (act.)<sup>9</sup>. By themselves verbal abstracts are neutral as regards voice.

The difference between *qatıl* and *qatıl* in Ar. could be the result of the difference of status of the verbal adj. depending on the conjugation (Ia or Ib):

<sup>9</sup> This distribution, though expressly stated by Ar. grammarians, is a tendency rather than a grammatical rule.

within Ia *qatīl* = chiefly abstract noun; *qatūl* = chiefly passive adj.;  
 within Ib *qatīl* = chiefly active adj. (*nomen agentis, auctoris*); *qatūl* = chiefly abstract noun.

Active value of *qatīl* in conj. Ia would be due to the influence of Ib.

In actuality there is in Ar. no rigorous parallelism between *qatīl* and *qatūl* concerning their use as verbal nouns or infinitives, both in conj. I and conj. II. The form *qatūl* is much rarer being generally replaced by *qutūl*. The same is true of their counterpart with short vowel *qatīl*, *qatul* when they are employed (chiefly in Ar.) as abstracts: *qatīl* is well attested, whereas *qatul* is replaced by *qutul*.

§ 26. The introduction of *qatala*, hence also of *qatal* (and of its derivatives *qatīl*, *qatāl*), into the intrans. conj. Ib started another semantic differentiation, *qatīl* = (active) intrans. verbal adj.: *qatal* „stative“ verbal adj. denoting enduring state or quality. Thus the merger of Ia and Ib acted in two directions: creating forms *qatīl*, *qatūl* with *trans.* value (influence of Ib on Ia), on the other hand giving rise to the opposition intrans. *qatīl* versus a purely adjectival *qatal* (influence of Ia on Ib). The latter opposition is followed also by conj. II.

Cf. for old conj. Ib<sup>10</sup>: Heb. *ḥāḥam* ‘be wise’: *ḥāḥām* ‘wise, clever’; *ḥālāl* ‘be pierced’: *ḥālāl* ‘pierced’; *ḥālaq* ‘be smooth’: *ḥālāq* ‘smooth’; *īšār* ‘be straight, just’: *īšār* ‘straight, just’; *sāmar* ‘bristle’: *sāmār* ‘bristly’; *rāša* ‘be (become) guilty’: *rāšā* ‘guilty’.

Conj. II: Ar. *ḥaduṭa* ‘be new’: Heb. *ḥādāš* ‘new’; Ar. *ṭarufa* ‘be recent, recently acquired’: Heb. *tārāf* ‘fresh’; Heb. *\*lāḇen* ‘be white’: *lāḇān* ‘white’; Ar. *‘aqura* ‘be sterile’: Heb. *‘āqār* ‘sterile’; Ar. *‘atuqa* ‘be free’: Heb. *‘āḫāq* ‘insolent; forward’; Heb. *qāṭon* ‘be small’: *qātān* ‘small’; Ar. *raḥiba* and *raḥuba* ‘be wide, spacious’: Heb. *rāḥāb* ‘wide, spacious’; Heb. *šāfel* ‘be low; humiliated’: *šāfāl* ‘low; humble’.

The stative verbal adj. *qatal* would thus be a successor of *qatul*. On the other hand the possibility that we have to do with the old abstract *qatal* of conj. II (§ 27), is not to be excluded.

§ 27. In conj. Ia the verbal adj. *qatal*, ousted by *qatīl*, *qatūl*, is generally preserved in secondary functions as noun, abstract or concrete. E.g.:

Heb. *ḥāḍar* ‘adorn’: *ḥāḍār* ‘adornment’; *ḥāmas* ‘oppress’: *ḥāmās* ‘wrong, injustice’; *īlād* ‘bear’: *īlād* ‘child’; *māšal* ‘quote’: *māšāl* ‘simile’; *šāchar* ‘hire’: *šāchār* ‘pay’; *šālal* ‘spoil, plunder’: *šālāl* ‘booty’.

The same secondary use of *qatal* as noun could be of course possible also with intrans. verbs, not only of conj. Ib, but also of II, e.g. *‘āšēm* ‘to sin’: *‘āšām* ‘sin, guilt’; *šāmeṭ* ‘be thirsty’: *šāmā* ‘thirst’; *rā‘ēb* ‘be

<sup>10</sup> Some of the respective verbs have originally belonged to conj. II.

hungry' : *ra'āb* 'hunger'; *šābēq* 'be sated' : *šābā* 'satiety, abundance'; *šāmēm* 'be afraid' : *šmāmā* 'fright'; (Ar. *ša'ida* 'step, climb' :) *š'ādā* 'marching, pace'. Notice, however, that the *qatal* abstract of conj. II finds an exact counterpart in the Ar. infinit. *qatal* from *īaqṭalu*, cf. also the Heb. infinit. *qṭal* as in *šehab* 'to lie', *šfal* 'to sink down, be abased'. This infinit. owes its rise to the proportion (*īa*)*qṭulu* : *qutul* = (*īi*)*qṭalu* : *qatal*. Thus from the genetic point of view *qatal* of conj. Ia corresponds to *qati/ul* of conj. II, *qatal* of conj. II to *qutul* of conj. I.

In Ar. the same semantic groups are represented, cf. Barth *op. cit.* p. 11, 166, 14, 105.

§ 28. From the adj. *qatal* two different abstracts may be derived, *qatl* and *qatāl*, the latter functioning as „absolute“ infinit. in Heb., as infinit. in Akk. In Ar. it serves as one of the possible *maṣḍars* of class I though it may also refer to class II, III, or IV if the verb has ceased to be represented in class I. E. g. 'add'ūn 'payment' from 'addā (II); *kalāmūn* 'word' < *kallama* (II); *ḡayābūn* 'answer' < 'aḡāba (IV) and *ḡāyaba* (III); 'atā'ūn 'gift' < 'a'tā (IV) and 'ātā (III); *naṣātu* 'will' > *naṣṣā* (II) and 'auṣā (IV).

As regards *qatl*, it belongs in the first place to the *qatala* conjugations Ia and Ib, cf. (concrete meaning is again secondary):

Old conj. Ia: Heb. *hāraḡ*, *īaharoḡ* 'kill' > *heṛeḡ* 'killing, massacre'; *māchar*, *īmkoṛ* 'sell' > *meḡeḡ* 'value, price'; *māšach*, *īmšoḡ* 'draw' > *meṣeḡ* (action noun); *īāḡel* 'roll' > *gal* 'heap of stones'; *īāḡen* 'protect' > *gan* 'garden; enclosure'; *īeḡeḡ* 'bear' > *īeḡeḡ* 'son'; *bāla*, *īīḡla* 'devour, swallow' > *bēla* 'thing swallowed'; *ḡāzar*, *īḡzar* 'cut in pieces' > *ḡeḡeḡ* 'piece, part'; *zābah*, *īizbah* 'to slaughter' > *zeḡbah* 'slaughter; victim'.

Old conj. Ib: *māraḡ*, *īmroḡ* 'rebel, revolt' > *meṛeḡ* 'rebellion'; *īiqsoḡ* 'be angry' > *qesḡ* 'anger'; *šābaḡ*, *īišboḡ* 'cease (working)' > *šeḡeḡ* (action noun); *zārah*, *īizrah* 'shine forth' > *zeṛah* 'sunrise'; *kā'as*, *īich'as* 'be discontent' > *ka'as* 'vexation, grief'; *mā'al*, *īm'al* 'be unfaithful' > *ma'al* 'unfaithfulness'.

Since *qatal* functions in conj. II as abstract noun (cf. above), the form *qatl*, which is structurally characterized as noun (chap. II § 41), is also admissible in conj. II, cf. 'ahēḡ, *īe'ḡahāb* 'to love' > 'ahāb 'love' (in 'ahāḡīm); 'aṣēm, *īe'ṣam* 'be guilty' > 'aṣmā 'guilt, sin'; *ḡeḡeḡ* < *īiḡbar* 'grow strong, increase'; *īeḡdal* 'cease' > *heḡeḡ* (\*action noun); *šāmeḡ*, *īišma* 'hear' > *šema* 'sound'; Ar. *ḡarisa*, Heb. *īeḡeraš* 'be deaf, mute' > *heṛeṣ* 'silence'; Ar. *ḡariba* > Heb. 'eṛeḡ 'evening'; Ar. *ša'ida*, Heb. *īiš'ad* 'march' > *ša'ad* 'pace'; Ar. *saḡmina*, Heb. *īišman* 'be fat' > *šeḡmen* 'fat' <sup>11</sup>.

<sup>11</sup> The form *qatl* (or *qatlat*) is also attested in the intrans. conj. of Ar. Statistics bearing on the first two letters of the alphabet show that in about 10% of verbs *qatila* and 12% of verbs *qatula* the form *qatl(at)* functions alone or may be used beside other forms as *maṣḍar*.

It is however possible that Heb. *qetel*, generally interpreted as the continuation of Sem. *qatl*, may in certain cases reflect Sem. \**qitl*.

§ 29. The type *qatāl* (with long degree) serving either to change the verbal adj. *qatal* into an abstract noun or to underline the abstract meaning of *qatal* (in its secondary function as noun) is both in Heb. and in Akk. the infinit. par excellence, independent of the root-vocalism of the verb. Just like *qatāl* it is attested in both conjugations. Conj. II: *kābōd* 'honour, glory' < *kābēd*, *iichbađ*; *šālōm* 'welfare' > *išlam* (Ar. *salima*); *mārōr* 'bitter thing' („bitterness“) < *iemar*.

The partial replacement of *qatīl* by *qatāl* in attributive function, characteristic of South Sem. (Ar. Eth.) has been already mentioned above (§ 8). Used attributively the abstract *qatāl* ousted *qatīl*, partially in Ar., totally in Eth., only after fem. nouns, making possible a differentiation of genders which up to then did not exist<sup>12</sup>.

§ 30. The type *qutūl* plays in Ar. the role of the infinit. of the intrans. verbs *iaqtīlu*, *iaqtulu* (*iaq'udu* 'sit': *qu'ūd* and so forth). This is an interesting remnant of the old distinction between conj. Ia and conj. Ib (chap. IV § 22), the common form of the infinit. of trans. verbs being *qatl*.

§ 31. The structural relation of *qitāl*, *qutāl* to (*qitīl*,) *qutīl* is best explained by the prefixal vowel of the underlying verb:

*iaqtīlu/ugtul* : *qutīl* = *iiaqtalu/iqatl* : *qitāl* = *iiaqtalu/ugtāl* : *qutāl* (for *iqatl* and \**ugtāl* cf. chap. II § 17 and § 32).

The replacement of *iiaqtalu* by *iaqtalu* in Ar. and the productivity of *qatāl(at)* (< *qatal*) in conj. II (§ 29) deprived *qitāl* in many cases of its status as abstract, limiting it to concrete meanings: nouns of implements, receptacles etc. Thus e.g. Ar. 'azara 'surround, protect', 'azzara 'cover, veil': 'izār 'veil'; 'asara, 'ia'siru 'bind': 'isār 'strap'; haḡaba 'to veil': hiḡāb 'veil'; ḡanaqa, ḡaḡnuqu 'strangle': ḡināq 'rope'; sanna, ḡasunnu 'whet': sinān 'whetstone'; satara, ḡasturu 'cover, veil': sitār; kasā, ḡaksū 'put on': kisā 'garment'; latama, ḡaltimu 'hide one's face': litām 'neckcloth, comforter'; ḡa'a, ḡa'i 'collect, put into a vessel': ḡi'a 'receptacle, vessel'; and so on.

If *qitāl* preserves its value of verbal abstract, it simply becomes a synonym of *qatāl*, cf. its appearance in conj. I: ḡasaba, ḡaḡsubu 'count': ḡisāb; nafara, ḡanfi/uru 'flee': niḡār; qāma, ḡaqūmu 'stand (up)': qiiām; 'āba, ḡa'ūbu 'return': 'iāb. — Cf. also ḡihāz = ḡahāz 'equipment' or ḡidāq = ḡadāq 'marriage-contract'.

Heb. has 'ezōr 'loincloth' < 'āzar, i'e'ezor; ḡaḡōr 'girdle' < ḡāzar, ḡaḡgor; ḡsōd 'foundation' < ḡāsād; ḡrōr 'pouch, bag' < ḡārār. The corresponding absolute infinitives would have the form *qatāl*, cf. e.g. ḡārōr.

<sup>12</sup> This means that the competition and the syntactical merger of *qatīl* and *qatāl* must have taken place when *qatīl* functioned already as an attribute.

§ 32. In the derived verbal classes (Ar. *qattala*, *qātala* etc.) the opposition between conj. I and II is abolished. This fact entails the merger of the corresponding verbal nouns (infinitives) *qatāl* and *qitāl*. It is the latter form which functions as *maṣḍar* of the classes III, IV, VII—X in Ar.: *qitāl*, *ʾiqṭāl*, *inqitāl*, *iqṭitāl*, *iqṭilāl*, *istiṭṭāl*.

§ 33. The form *qitāl* is in Ar. attested for verbs of conj. II (*ṯaqṭalu* < \**ṯiqṭalu*) as abstract noun denoting dimensions, e.g. *kibar* 'advanced age' < *ṯakbaru*; *ṣiḡar* 'smallness' < *ṯaṣḡaru*; *siman* 'obesity' < *ṯasmanu*; *sira* 'swiftness, speed' < \**ṯisra*'u. The association of *qitāl* with the deverbative adjectives *qatīl* is secondary. The reinforcement of the abstract value of *qitāl* produces *qitāl* which serves as the pl. of the corresponding adj. *qatīl*. Therefore between *kabīr* (adj.): *kibar* (abstract), and *kabīr* (sing.): *kibār* (pl.) there is a chronological, not only semantic difference.

Eth. *qetal*, with *e* continuing a Sem. *i* or *u*, is a frequent abstract noun from intrans. verbs. It may correspond to the Heb. infinit. *qṭal*. The preservation of \**qitāl* in these two languages is undoubtedly due to the prefix *ṯi-* (Heb. *ṯiqṭal*), *iṯ-* before laryngeal, Eth. *ṯe-*(*ṯeqṭal*), replaced by *ṯa-* in Ar. Cf. Heb. *neḥḥār* 'foreign country' (Ar. *nakira* 'be ignorant').

§ 34. At first glance it may seem surprising that most examples of Ar. *qital* and *qutal* occur in weak verbs with  $R_3 = \text{u, i}$ . Cf. e.g.:

Type *qital*: *bilān* < *baliṯa* < \**baliṯa* 'be worn out'; *riḏān* (and *ruḏān*) < *radiṯa* < \**radiṯa* 'be content'; *ḡinān* < *ḡaniṯa* 'be rich'; *fiḏān* < *fadā* 'buy off, ransom'; *ṣirān* < *ṣarā* 'buy'; *qirān* < *qarā* 'receive (hospitably)'; *qilān* < *qaliṯa* 'detest, hate'.

Type *qutal*: *bukān* < *bakā* 'weep'; *ṯubān* (and *ṯibān*) < *ṯabā* 'receive'; *surān* < *sarā* 'travel (at night-time)'; *hudān* < *hadā* 'lead'.

The centre of this radiation of *qital*, *qutal* must be looked for in verbs with  $R_3 = \text{u, i}$  belonging to conj. II (prefixes *ṯi-*, *ṯu-*, etc.), cf. *baliṯa*, *radiṯa*, *ḡaniṯa*, *qaliṯa*. The corresponding forms *qitān*, *qutān* are interpreted as *qitṯi* + *ān*, *qutṯi* + *ān* (*qitṯu* + *ān*, *qutṯu* + *ān*) with the morphological (not phonemic!) elimination of the semivowel *ṯ*, *u*. This is the preliminary condition for the introduction of *-ān* into verbs  $R_3 = \text{u, i}$  belonging to conjugation I. The forms *qitān*, *qutān* being analysed as forms with suffix *-ān* attached to *qitl*, *qutl*, where the third radical is a semivowel, the procedure may be applied to verbs of conj. I having the same structure of the root<sup>13</sup>.

<sup>13</sup> *-ān* must be distinguished from *-ā'u*, the latter being the reinforced abstract with lengthened vowel, frequently appearing side by side with the former. Cf. *ṣirā'u* = *ṣirān*, *bukā'u* = *bukān* etc., or with a difference of vocalisation in the first syllable: *balā'u* = *bilān*, *ḡanā'u* = *ḡinān* (*qatāl* : *qital*), and so forth.



§ 35. In Ar. the form *qutāl* is etymologically connected with *qutīla*, *īqṭalu* whose function is not only the passive of Ia. In verbs belonging to certain semantic categories the form is intrans.-fientive. Competing with *qatīla*, *īqṭalu* it often denotes abnormal states or maladies: e.g. *hu-zila* 'be meagre': abstract *huzāl*; *ṣudī'a* 'to have head-ache': *ṣudū'*; *ḡu-ḍiba* and *ḡaḍība* 'to be afflicted with small-pox'; *ḥabila* 'to be pregnant': *ḥubāl*; *sahīda* 'suffer from insomnia': *suhād*; *ʿaṭīša* 'be thirsty': *ʿuṭāš*; and so on.

The abstract noun *qutāl* could be also used as an adj. *qutāl* expressing an *intensive* degree of a quality; cf. *ṣaḡīr* 'small': *ṣuḡār*; *ʿaḍīb* 'admirable': *ʿuḡāb*; *kabīr* 'big, great': *kubār*; *kaṭīr* 'numerous': *kuṭār*; *malīḥ* 'graceful, pretty': *mulāḥ*. The relation between *normal degree of quality* (*kabīr*) and *intensive degree of quality* (*kubār*) has developed from *īqṭalu* 'be big etc.' (verbal adj. *kabīr* etc., cf. § 33): *īqṭalu* 'grow abnormally big etc.' (v. adj. *kubār* etc.).

With additional gemination we get *kubbār* < *kubār*; *ʿuẓẓām* < *ʿuẓām* < *ʿaẓīm* 'great'; *kurrām* < *kurām* < *karīm* 'noble, generous'; *ḥuffāf* < *ḥu-fāf* < *ḥafīf* 'light, nimble'.

The nucleus of the opposition between normal and intensive adj. may well have originated in *īqṭalu* (> *qatīl*): *īqṭalu* (> *qutāl*), but cf. § 37.

Lengthening and -at being equivalent we also find concrete (personal) nouns like Ar. *humazat* 'teaser', *hudarat* 'prattler'.

§ 36. The type *qutāl* is moreover used in Ar. as a concrete noun denoting the result of a trans. action, e.g. *ḥaṭama*, *īaḥṭimu* 'break' > *ḥuṭāmat* 'piece'; *rafata* 'break into small pieces' > *rufāt*; *fatta*, *īafuttu* 'crumb(le)' > *futāt* 'crumb'; *qalama*, *īaqḷimu* 'pare' > *qulāmat* 'pared off nails etc.'; *qaraḍa*, *īaqriḍu* 'gnaw' > *qurāḍat*; *qāra*, *īaqūru* 'cut (out)' > *quṣārat* 'cutting, hole'; *nasafa*, *īansifu* 'winnow' > *nusāfat*; *našara*, *īanšuru* 'saw' > *nušārat*; etc.

The meaning of such forms points to an original intransitive-passive verbal form. Therefore when referred to a trans. *qatala*, they have a passive value. It is probable that the original opposition is *īqṭalu/īqṭalu* → *qatīl* → *qutāl(at)*, cf. *fatīt* 'crumbled' → *futāt*, *ṣabīb* 'spilt' → *ṣubābat*.

§ 37. Notice that the intensive shade of meaning of *qutāl* is also proper to the corresponding verbal adjectives with short vowel (*qatal*). Heb. *šə'ār* 'abominable' from *īqṭalu*; Ar. *ḥadīr*: *hudarat* 'prattler, babbler'; *qadīm*: *quḍām* 'very generous'; *ḥalī*: *ḥulā* 'very impatient, greedy'; *ḍāḥī*: *ḍu-ḥa'at* 'lazy'. Also with geminated R<sub>2</sub>: *ṣalība* and *ṣaluba* 'be hard' → *ṣalīb* → *ṣullab*; *ṣummāl* besides *ṣumal* 'cowardly'. — Verbal adj. from trans. verbs are e.g. *ḥaṣīr*: *ḥuṣār* 'tearing' (lion); *sābb* (< *sābib*): *subabat* 'slanderer'.

The simplest explanation would be therefore to assume a secondary association between *qatīl*, the verbal adj. of *īqṭalu* (the predecessor of

the passive) and the verbal abstract *qutāl(at)* of *ḡuqtalu*, the abstract serving as a reinforcement of the adj. The spread of *qatīl* outside conj. II was accompanied by that of *qutāl*.

§ 38. The fact that the type *qutāl* is often strengthened to *quttāl* proves that the intrinsic value of the former is *intensive*. It seems that *qutāl* served also to enhance in a similar way the value of *qatīl* as *abstract noun*. Cf. *'anīn* = *'unān* 'groan', *ṣahīṣ* = *ṣuhāṣ* 'croak', *nahīq* = *nuhāq* 'bray'; *ḡa'ara*, *ḡaḡ'aru* 'to low' : *ḡu'ār*; *nabaḥa* 'bark' : *nubāḥ*; *da'ā*, *ḡad'ū* 'call' : *du'ā* (verbs referring to emission of voice). Also *sa'ala*, *ias'alu* 'ask' : *su'āl*. — The same function of *qutāl* (versus a attested or potential *qatīl*) is manifest in some verbs denoting movement: *ṣarāda*, *ḡaṣrudu* 'to escape'; *qamaṣa* 'gallop'; *nazā*, *ḡanzū* 'assail' : *maṣdar ṣurād*, *qumās*, *nuzā*, etc.

§ 39. These are of course *tendencies*, not rules. There are many examples of *qitāl*, *qutāl* whose ancient abstract value does not depend on the lexical meaning of the root. But they are not representants of productive groups.

The change adjective < abstract was, however, less advanced for *qitāl*, *qutāl* than for *qatīl*, *qatūl*. The frequent adjectivization of the latter is due to the survival of the adjective value of *qatīl*, *qatul*, whereas adjectives of the form *qital*, *qutal* are rare.

§ 40. Adjectivization of *qatīl*, *qatūl* entailed sometimes a *new differentiation*, thus in Heb. between *qatīl*, *qatul*, participles of conjugation II, and (nouns and) adjectives *qatīl*. Generally speaking, in West Sem. a functional difference was originally established between the participles *qatīl*, *qatul* of conj. II and partly of conj. Ib, and *qatīl*, *qatūl*, abstracts and participles of the passive of conj. Ia.

§ 41. The substantival function of *qatīl* (abstract and concrete nouns) is attested in Akk. There is an opposition between *parsu* < *parīsu* (adjective or stative) and the corresponding noun *parīsu* (GAG p. 60):

*zaqpu* 'planted, erected' : *zaqipu* 'pile'; *ḡassu*, verbal adj. from *ḡasāsu* 'think' : *ḡasīsu* 'thought, intellect'; *sakku* 'obstructed; deaf' : *sakīku* 'obstruction of a canal; mud, mire'; *salmu* 'friendly (> friend)' : *salīmu* 'kind disposition, sympathy'; *raksu* 'bound' : *rakīsu* 'team of harnessed horses'; (*w*)*eldu* 'born' from (*w*)*alādu* 'give birth, bring forth' : *līdu* 'descendant'.

The overall Sem. tendency to use abstract nouns as appositions (hence also as attributes) leads to an occasional semantic merger of *paris* and *pāris*. But there is the graphical ambiguity of *paris* (= *parīs* or *pāris*) as well as of the construct state *paris* (*parīs*, *parīs* and *pāris*) making sometimes difficult a neat distinction between *pāris* and *parīs* used as adjective. If the basic verb is intransitive, *paris* may represent *qatīl* rather than *qatīl*, e.g. *labru* : *lābiru* 'old, former; original (document)' < *labāru*

'be (grow) old'; *nakru* : *uđkiru* 'strange, hostile; enemy' < *nakāru* 'be (grow) hostile'; *anhu* : *ānihu* 'tired' < *anāhu* 'grow tired'; *kaušu* : *kānišu* from *kanāšu* 'be submissive, obsequious'. If, on the other hand, the basic verb is transitive, meaning may serve as a clue for choosing between *qatīl* and *qātīl*, e.g. *šākiuu* 'gardener' from *šakānu* (transitive), *zaqīpu* 'pile' but *zāqīpu* 'gardener' from *zaqāpu* 'to plant'.

§ 42. The case of *parus* is less difficult since the type *qātul* is rare in Sem. Hence the interpretation of *parus* (setting apart the construct state) will be *qatūl*. We find both nouns and adjectives though the former seem to be more numerous: *emāqu* 'strength' < *emēqu* 'be strong'; *asurrū* (old pl.) 'wall' < *asāru* 'enclose, shut in'; *ba'ūru* 'catch, hunt' (noun) < *ba'āru*; *batāqu* 'cutting' (action noun) < *batāqu*; *šalūlu* 'protection' < *šalālu*; *kašāšu* 'strength' < *kašāšu* 'be (grow) strong'.

On the other hand *parūs* is used as passive participle in poetic language (GAG p. 60), e.g. *karābu* 'blessed' < *karābu*; *ba'ūlu* 'subdued' < *bēlu* (< *be'ēlu*); *ra'ūmu* 'beloved' < *ra'āmu*, *rāmu*.

§ 43. The type *qitāl* (*pirās*) is represented, among others, by *igāru* 'wall' < *egēru* 'surround, enclose'; *šikāru* '(strong) beverage' < *šakāru* 'get intoxicated, drunk'.

Instances of *qitāl* (*purās*): *ḥusāhu* 'hunger' < *ḥasāhu* 'crave, need, request'; *lubāšu* 'garment' < *labāšu* 'clothe'; *šubātu* 'garment'; *šukānu* 'possession' < *šakānu*. For the „expressive“ use of *qitāl* forming denominative diminutives and augmentatives cf. chapter IX § 3.

Finally the form *qatūl* (*purūs*) yields a sufficient number of examples to prove its essentially substantive character, whereas *qatāl* (*parās*) functions especially as infinitive, i.e. originally as verbal abstract.

These examples justify the assumption that the lengthening of the vowel of  $R_2$  is the exponent of substantive value in deverbative derivatives. The chief semantic function is that of abstract, secondary functions being represented a) by infinitives, e.g. *parās*; b) by adjectives, e.g. *parūs* (*ba'ūlu*, *karābu*, *ra'ūmu*); c) by concrete nouns, e.g. *parīs* (*zaqīpu*) etc., *purūs* (*lubāšu* 'garment'; *rukābu* 'vehicle'), *purās* (*šubātu*, *šukānu*).

§ 44. Gemination of  $R_2$  or  $R_3$  in word-formation is to be traced back to an underlying verbal form with  $R_1$ - $R_2$  $R_2$ - $R_3$  or  $R_1$ - $R_2$ - $R_3$  $R_3$  since it occurs only in *deverbative* nouns. Although a verb like *qattala* is supposed, on theoretical grounds, to be itself the derivative of an adjective or noun (chap. I § 3), it has been undoubtedly the source of  $R_2$  $R_2$  in nominal formations occurring in the historical languages. The nominal types with geminated  $R_3$ , though much less represented, are also based on verbal forms like the classes IX or XI of Ar. (*iqṭalla*, *iqṭālla*).

Thus *qattal* is evidently a reinforcement of the active verbal adj. *qatal* due to the proportion *qatala* : *qatal* — *qattala* : *qattal*. It serves in the first

place as a verbal adj., in the second place as agent noun (*nomen agentis*). This formation has played an important role in forming the new Akk. present *iparras*, functionally identical with the Engl. progressive (continuous) form (= „he is severing“), at least as long as the old present *iprusu* was still in use (chap. III § 2, § 15).

§ 45. Heb. examples of *qattal* adj.: *ḥattā'ā* 'sinful' (fem.) < *iḥē'tā*; *nag-gāh* 'given to butting, goring' < *ḡiggah*; *sallāh* 'forgiving' < *iislah*; *qaššebeḥ* 'attentive' (fem.) < *ḡiḡṣab*; *raggāz* 'trembling' < *ḡirgaz*; *šalleṭeḥ* 'insolent, impudent' (fem.) < *ḡišlat*.

Abstracts (> concrete nouns) in *-(a)t*: *ḥattā'ā* and *ḥattā'ḥ* 'sin' < *iḥē'tā*; *ḥārābā* 'dry land' < *iḥē'rab*; *iabbāšā* 'dry land' and *iabbēšeḥ* < *iḥbaš*; *dalleqeḥ* 'fever' < *ḡidlaq*; *tabbā'aḥ* 'seal, ring' < *iḥba'*.

In some cases the old relation with *pi'el* is still attested: *ballāhā* 'fright', cf. the part. pl. *mballḥim*; *baqqārā* 'care' < *iḥbaqqer* 'consider'; *baqqāšā* 'desire' < *biqqeš* 'search, investigate'; *qallāšā* 'mockery', cf. the infinit. *lqalles*.

Substantival agent nouns: *gannāb* 'thief' > *ḡiynob*; *daijān* 'judge', (*iādīn*); *ḥārāš* 'stone-cutter' (*iāḥ'aroš*); *ṭabbāḥ* 'cook' < *tābāḥ* 'kill (cattle)' hence 'cook'; *sabbāl* 'carrier, porter' (*iisbol*); *ṣaijān* 'hunter' < (*iāšūn*); *rakkāb* 'rider, driver' (*iḥrkab*); *raqqāḥ* 'pigmentarius' (*ḡirqaḥ*). — From *pi'el*: *kaššāf* 'sorcerer, wizard' < *kiššef*; *qallā* 'slinger', cf. *naiqalla*. Ar. *naḡḡār* 'carpenter, joiner' < *naḡḡara* 'to rough-hew (wood)'; *ḡabbān* 'cheese-monger' < *ḡabbana* 'curdle (milk)'.

Akk. has *parrāsu* with an uncertain quantity of the second syllable. Since, however, the length of the Ar. agent nouns (*naḡḡāru* 'carpenter', *ṭabbāḥu* 'cook') is explained by Aram. influence, we must regard *qattāl* as the Common Sem. model, secondary morphological lengthening being always possible (adj. > abstract > concrete noun).

§ 46. Once the relation *qatala* : *qattal* had been firmly established, *qattil* from *qatila* became also admissible.

In Heb. *qattil* is the normal form for adjectives denoting physical defects. Otherwise it is generally *qattil* which serves to form adjectives referring nearly always to persons and therefore liable to be used also as nouns. But owing to the confrontation with *qatil*, verbal adj. both of *qatila* and *qatala* (§ 16 f.), *qattil* was perceived as an intensive form of *qatil*:

'abbir 'strong' (adj. and subst.) besides 'ābir; 'addir 'great, mighty'; 'ammis 'vigorous, strong'; iqqir 'dear'; kabbir 'great, mighty' (cf. Ar. *ka-bīru*); ṣaddiq 'just, honest, loyal'; ṣaggi 'big'; šallit 'ruler'; taqqif 'strong'.

The affinity between *qatil* and *qatūl* (cf. above §§ 16, 25) makes us expect *qattūl* as the intensive form of *qatūl*:

*qatal* : *qattal* — *qatūl* : *qattul* (plus lengthening).

E. g. Heb. *hallūq* 'smooth'; *ḥannūn* and *raḥūm* 'merciful'; *šakkūl* 'childless' („perf.“ *šāchōl*). Hence abstracts in (-at >) -āt like *ḥammūq* 'turning' (action), and concrete nouns e.g. 'allūf '(intimate) friend', 'ammūd 'column' (but Ar. 'amūdū), 'attūd 'billy-goat' (but Ar. 'atūdu, Akk. atūdu). Notice that sometimes the „intensive“ has been only graphical, cf. the alternation *qatūl*/*qattūl* within the same word-form as in 'aššurēnū and 'ašurēnū 'our stride' or in *ḥabburōp* 'wounds' and *ḥabūrāpō* 'his wounds'.

Heb. *qittūl* (from *quttūl* by dissimilation) can be explained by the proportion *iaqtīlu* : *qutūl* (infinit.) = *iaqattīlu* : *quttūl* (+ lengthening). The form is therefore characteristic of *pi'el* abstracts (> concrete nouns). E.g. *ība'eḥ* 'frighten' : *bi'ūpīm* 'objects of terror'; *īgaddef* 'mock, blaspheme' : *giddūfīm* 'mockery'; *īhallel* 'praise' : *hillūlīm* 'jubilation (at feasts, weddings)'; *īḥaššeḡ* 'bind' : *ḥiššuqīm* 'spokes (uniting the nave with the felly)'; *īchapper* 'atone' : *kippurīm* 'atonement' : *ina'eḡ* 'commit adultery' : *ni'ufīm* 'adultery'; *inaḥem* 'console' : *niḥumīm* 'consolation'; *īfattah* 'engrave' : *pittūah* 'engraving'; *īšappē* 'cover, coat' : *šippūi* 'coating (of metal)'; *īqabbeṣ* 'assemble' : *qibbūṣ* 'assembly'; *īqaššer* 'bind' : *qiššurīm* 'girdle'; *īraqqa* 'malleate, flatten' : *riqqū'im* 'sheet, foil of metal'; *īšakkel* 'deprive of children' : *šikkulīm* 'being childless'; *īšallah* 'dismiss' : *šillū-ḥīm* 'dismissal'; *īšalleḡem* 'requite' : *šillum(ā)* 'requitall'; *īšaqqeṣ* 'detest' : *šiqquṣ* 'abomination'; *īmalle* 'mount, enchase' : *millū'ā* 'setting (of jewels)'.

In most cases gemination of  $R_2$  implies the simultaneous lengthening of the root-vowel, cf. also *qittāl*, *quttāl*, *qittīl*, *quttūl*. From the *chronological* point of view the types *qaxttāzl* represent a superposition of lengthening upon gemination rather than the opposite, although in individual cases *qaxttāzl* may be a reinforcement of *qaxtāzl*.

§ 47. Verbal forms with  $R_3R_3$  are represented chiefly in Ar.: *iqṭalla* (class IX), *iqṭālla* (class XI). The „imperf.“ of *iqṭalla* shows an alternation between *iaqtall-* (before vowel) and *iaqtalil-* (before consonant or zero). Both forms have become productive in deverbative word-formation.

a) *īqṭalu* (Ar. *iaqtalu*) : *qital* = *iaqtallu* : *qital*. And on the model of *qital* : *qital* derivatives with gemination of  $R_3$  may be formed from other deverbative adjectives or nouns. For *qital* : *qittal* cf. Ar. *ḥaḡifa* 'have a flaccid belly' : *ḥiḡaffu* 'bigbellied'; *raḡila* 'be clumsy in dressing etc.' : *riḡallu* 'trailing one's garment'; *ḥaḡima* 'be ravenous' : *ḥiḡammu* 'insatiable, gluttonous'; *laḡima* 'swallow' : *liḡammu* 'swallowing greedily'.

These examples show that originally class IX (*iqṭalla*) must have been an *intensive* form of *qatila*, whereas its Ar. *limitation* to adjectives denoting colours and physical defects (which as a rule are rendered by intensive forms, cf. chap. IX § 6) represents a particular development.

Cf. on the other hand examples like *ḡadiba* 'be angry' : *ḡudubbu* 'hot-

tempered, irascible'; *ḥadura* 'to swell and become hard' : *ḥudurrūn* 'swollen, thick'; *qamida* 'be long-necked' : *qumuddūn* 'long-necked, strong, stiff'; *ḡalaba* 'conquer' : *ḡulubbātu* and *ḡulubbā* 'victory'. — The transformation *ḡaḍiba* → *ḡuḍubbu* presupposing an intermediate link *\*ḡuḍubu* may be paralleled by examples like *ḡaniba* 'be polluted' : *ḡunubu* or *saḡiḥa* 'be even, smooth' : *suḡuḥu*.

§ 48. b) Sem. *ianqatil* : *\*naqtal* (cf. Heb. *nif'al* < *\*naf'al*, Akk. *na-pris*) suggests a similar relation *iaqtabil* : *qatal*, borne out by Heb. *pi'lel* and *pi'lal* (< *pa'lal*), cf. *ra'anān* 'be green'. Therefore *iaqtal* (Ar. *iaqtal*) : *qatal* = *iaqtabil* : *qatal*. The opposition *qatal* : *qatal* becomes productive. Hence the possibility of reinforcing *qatal* to *qutlal*, *qutul* to *qutlul* etc. by inserting *R*<sub>3</sub> before the vowel the second syllable. The same procedure may be applied to forms with lengthening: *qitāl*, *qitāl*, *qatīl*, *qitīl*, *qatūl*, *qitūl* are originally intensive forms of *qatāl*, *qitāl*, *qatīl*, *qitīl*, *qatūl*, *qitūl*, respectively. The relation between the basic and the intensive forms is not always direct. Synonymity of a basic form *x* with another basic form *y* or the replacement of *x* by *y* may entail a relation *y* → *x'* (intensive form of *x*) instead of *y* → *y'* (intensive form of *y*).

Thus the forms *qutlul* presupposing a basic *qutul* must be referred to *qutūl* which has ousted the old infinit. *qutul* in instances like Ar. 'anada, infinit. 'unūdu 'withdraw' : 'undudu 'escaping'; daḡala, infinit. duḡūlu 'enter' : duḡlulu 'intimacy', ad-duḡlulūna 'intruders'; qa'ada 'sit', infinit. qu'ūdu : al-qu'dudu 'residents, inhabitants'. On the other hand the theoretically postulated, immediate basic forms of *qitlūl* (Ar. for *qatīl*, cf. *GVG* I p. 181) are often lacking. Cf. *ri'dīdu* 'timid', *ri'sīšu* 'trembling', *zih-līlu* 'sloping, precipitous' from *ra'ada* 'frighten, menace', *ra'aša* 'tremble', *zaḡala* 'collapse' via virtual intermediate forms *\*ra'īdu*, *\*ra'īšu*, *\*zaḡīlu*, respectively.

§ 49. In the case of cumulation of lengthening and doubling of *R*<sub>3</sub> or *R*<sub>2</sub> we must assume the chronological priority of the latter procedure since lengthening of the vowel of *R*<sub>2</sub> scarcely occurs in the classes of the personal verb (there is only the exception Ar. *iqṭālla* (*iqṭālil*)). But in individual instances the chronology may be inverse, i.e. forms like *quttāl*, *qutlāl* may be the result of either *qatal* > *quttal* (*qutlal*) > *quttāl* (*qutlāl*) or of *qatāl* > *quttāl* (*qutlāl*).

§ 50. Among the deverbative nouns formed by means of prefixes those with the prefix *m-* are the most important.

*A priori* one would expect the deverbative type *maḡtaʔl* to preserve the vocalism of the underlying verb, both in the root and in the prefix (*iaqṭilu* > *maḡtil* etc.). Since however *maḡtaʔl* is a derivative, splits due to vocalic alternation and apophony are liable to occur, just as within the system of the primary verb (chap. II).

The variety of meanings developed by the *m*-formations<sup>14</sup> may be explained by an original abstract value.

To judge by the Ar. rule that the nouns of place and time have (at least partially) the vocalism of the underlying „*imperf.*“, we are entitled to posit as the starting-point of the evolution of *m*-derivatives:

*iaqtalu* *iaqtilu* *iaqtulu* *iigtalu* *iugtalu*  
*maqtal* *maqtıl* *maqtul* *miqtal* *muqtal*

If  $R_3$  (-*l*) = laryngeal, the form *maqtal* may be interpreted either as *maqtal* or as *maqtıl*/*maqtul*, hence *maqtal* = primary function, *maqtıl* or *maqtul* secondary functions.

If, on the other hand,  $R_1$  (*q*-) = laryngeal, the interpretation may be *maqtal* = primary function, *mi*/*uqtal* = secondary functions.

Whereas *maqtal* preserves the primary function of an abstract noun, *maqtıl* develops a secondary meaning, becoming a *nomen loci et temporis*. On the other hand *miqtal* is henceforth the chief exponent of nouns denoting implements.

§ 51. The semantic contrast between *maqtal* and *maqtıl* may be illustrated by Ar. examples like:

Verb	Verbal abstract ( <i>maşdar</i> )	<i>Nomen loci</i>
<i>iaqlisu</i> 'sit'	<i>maqlasun</i>	<i>maqlis(at)un</i>
<i>iaqbisu</i> 'imprison'	<i>maqlbasun</i>	<i>maqlbisun</i>
<i>iasqutu</i> 'fall'	<i>masqat(at)un</i>	<i>masqitun</i>
<i>iansi/uku</i> 'sacrifice, offer'	<i>mansakun</i>	<i>mansikun</i>
<i>iauřalu</i> 'be afraid'	<i>mauřalun</i>	<i>mauřilun</i>

But in many cases *maqtal* penetrates into the semantic slot of secondary functions (*nomen loci, temporis*). Thus e.g. *madřal* (< *iađřulu* 'enter'), *maşra* (< *iaşra'u* 'throw down'), *mařla* (besides *mařli*; < *iařlu'u* 'rise'), *mařbar(at)* are both abstracts (*maşdar*) and concrete nouns. Hence the competition between *maqtal* and *maqtıl* as *nomina loci, temporis*, e.g. *maşad* and *maşid* (< *iaşıdu* 'prostrate oneself'), *maskan* and *maskin* (< *iaskunnu* 'dwell'), *magsal* and *magsil(at)* (< *iasıilu* 'wash'), *mařraq* and *mařriqat* (< *iařruqu* 'part, separate'), *manbat* and *manbit* (< *ianbutu* 'sprout, grow'), *mağrab* and *mağrib* (< *iağrubu* 'disappear, set (sun)'), *mañřar* and *mañřir* (< *ianhi/uru* 'snore, snort') etc. etc. This fact accounts also for the appearance of *maqtıl* as verbal abstract (*maşdar*). Thus the forms *maqtal* and *maqtıl* are used indifferently in both functions in instances like *mařfaq*, *mařfiq* (< *iařfuqu* 'lean upon'), *mařirr* (< *iařirru* 'flee'), *mahlakat* (< *iahlıku* 'perish') and so on.

<sup>14</sup> Abstracts, participles, *nomina instrumenti, loci, temporis*.

§ 52. The form *maqṭul* is represented by a relatively small number of examples: *ma'kulat* (concrete noun < *ia'kulu* 'eat'), *ma'lukat* (abstract < *ia'luku* 'send'), *maštumat* (besides *maštamat*, abstract < *iaštumu šatama* 'insult').

The split *maqṭil* : *maqṭul*, due to *-ui* > *-ii* (chap. II § 14), is difficult to define from the functional (semantic) point of view<sup>15</sup>.

The above data explains the traditional rules concerning the vocalization of the Ar. *nomina loci et temporis*:

- 1) *i* if the vowel of the „imperf.“ is *i* or *a*
- 2) *i* or *a* if the vowel of the „imperf.“ is *u*, the former vocalization being limited to a small number of instances.

The agreement of root-vowels as between *iaḡlisu* and *maḡlis* is therefore purely accidental.

§ 53. The form *miqtāl* serves in Ar. chiefly for names of implements, *misann* 'whetstone' < *sanna*, *miṭṭāḥ* 'key' < *fataḥa* and so on. There is a semantic relationship between *miqtāl* and *qitāl* (whose *i* goes back to the prefixal vowel of conj. II). Cf. *'iṭāf* = *mi'tāf* 'cloak', and other examples in Barth *op. cit.* p. 61 n. 1. Moreover, *miqtāl* replaces *qitāl* in its attributive function, e.g. *mi'tār* 'perfumed'. Direct relation between *miqtal* and *qital* is evidenced by examples like *\*iḡzanu* (*ḡazina*) 'be sad' > *\*ḡizan* > *miḡzān* 'very sad', or *\*iḡbitanu* (*baṭina*) 'be bigbellied' > *\*biṭan* > *mibiṭān* 'bigbellied'.

The type *maqṭal* became the starting-point of the formation of participles, not only in Ar. (cf. above chap. II, § 39).

§ 54. In Hebrew the generalization of the timbre *i* in the verbal prefixes of the verb rendered impossible a morphological distinction between abstracts<sup>16</sup> (*maqṭal*) and names of implements (*miqtal*). The original timbre *a* of *maqṭal* and *maqṭil* (cf. *infra*) appears wherever the corresponding verb has maintained the *a* of the prefix, i.e. chiefly before „laryngeal“ (‘, *h*, ‘, *h*) and in verbs with  $R_2 = R_3$ , e.g. *iaṣoḥ* 'cover, guard' > *māsaḥ* 'covering, screen'; *iaṣen* 'cover, protect' > *māṣen* 'shield'. The rule that the *m*-derivative is dependent for its vocalisation on the prefix of the basic verb suffers some exceptions to be explained by chronological and semantic factors. Thus in spite of the prefixal *i* of the underlying verb we have *mamlāḥā* 'kingdom' (*iṣmlaḥ*), *malmād* 'ox-goad' (*iṣlmād*), *maš'āb* 'watering-channel' (*iṣš'āb*), putting aside some derivatives from irregular verbs (*primae* aleph, *h*, *i*, *n*,  $R_2 = R_3$ ). In the form *maqṭul* *a* is always preserved.

<sup>15</sup> As regards *\*muqṭal* (versus *miqtal*) it has served as pattern of the West Sem. abstracts of the derived classes; (Ar.) *muqattal*, *muqāṭal*, *muqṭal*... Adjectivized they function as participles. In Ugar. the infinitives of the intens. and the caus. are also formed with *m*-.

<sup>16</sup> And related concrete nouns like the object or result of action.



Abstracts (action nouns), e.g. *ḡimkōr* 'sell' : *mimkār* 'sale, merchandise'; *ḡifqōd* 'inspect, review' : *mifqāḏ* 'muster'; *ḡifrōs* 'spread out' : *mifrās* 'sail'; *ḡiqsōm* 'practice divination' : *miqsām* 'divination'; *ḡišbor* 'break' : *mišbār* 'breaking'; *ḡišpōt* 'judge' : *mišpāt* 'judgement'... Names of implements: *ḡizroq* 'toss, sprinkle' : *mizrāq* 'bowl (for tossing)'; *ḡichlā* 'restrain, keep back' : *michlā* 'fold, pen'; *ḡin'al* 'close' : *min'al* 'bolt'; *ḡiqqah* 'take' : *mēlqāḡaiim* 'tongs'; *ḡirqah* 'mix ointment' : *mērqāḡā* 'ointment-pot'. Nor is there a trace of a differentiation *abstracts* versus *nomina loci (temporis)*, cf. *ḡidroch* 'tread, march' : *midrāch* 'footstep'; *ḡiškon* 'dwell' : *miškān* 'dwelling-place'; *ḡizrah* 'rise' : *mizrāh* 'orient'; *ḡirḡah* 'be distant' : *mērhāq* 'distance'; *ḡiškab* 'lie down' : *miškāb* 'couch, bed'; *ḡišlāh* 'send' : *mišlāh* 'place where cattle is driven'.

§ 55. Although *maqtīl* is well attested, it offers the same variety of meanings as *maqtal*: abstracts like *ḡichšōl* 'stumble' : *machšēlā* 'decay, ruin'; *ḡirfā* 'recover' : *marpē* 'recovery, remedy'; *ḡiššā* 'lift' : *maš'ēḡ* (for \**mansi* 'at') 'lifting'; names of implements like *ḡichtōš* 'crush' : *machtēš* 'mortar'; *ḡišroḡ* 'refine (metals)' : *mašreḡ* 'melting-pot'; *ḡizmor* 'cut' : *mazmerā* 'pruning-knife'; *ḡiftah* 'open' : *mafteḡah* 'key'; *ḡizzar* 'cut' : *magzzerā* 'axe'; *ḡaharōš* 'plough' : *maḡarešā* 'ploughshare'; *nomina loci* like *ḡišbor* 'break' : *mašber* 'womb' (place of „breach“); *ḡirbaš* 'to lie' : *marbeš* 'couch, bed'.

The vowel *a* is at first glance surprising. It is, however, intelligible as being due to the prefix of the underlying personal verb which in many cases has the form *hiḡ'il*. Thus *ḡastir*, *ḡaster* 'veil' : *master* (abstract); *ḡaššib*, *ḡaššēb* 'erect' : *maššēbā* 'statue'; *ḡaghil*, *ḡaghel* 'assemble' : *maḡhelim* and *maḡhelōḡ* 'assembly'; *ḡargiā* 'live in peace' : *marge'a* 'resting-place'. — In two instances it is the prefixal *i* of *miqtal* or the radical *i* of *maqtīl* which accounts for *miqtīl* (< *maqtīl* or *miqtal*); *ḡispōd* 'wail' : *mispeḡ* 'wailing', *ḡizbah* 'slaughter' : *mizbeḡah* 'altar'.

§ 56. Like in Ar. the type *maqtul* is represented under fem. form (\**qatlnu*)<sup>17</sup> in a limited number of instances: *ḡō'cheḡ* 'eat' *ma'acheḡēḡ* 'food', also *makhḡēḡ*; *ḡahlōm* 'beat' > *maḡlummoḡ* 'strokes, blows'; *ḡah'loq* 'distribute' > *maḡloqēḡ* 'share'; *ḡiškor* 'hire' > *maškorēḡ* 'pay'; names of implements like *ḡahḡor* 'gird' > *maḡḡoreḡ* 'girding'; *ḡiḡkōd* 'catch' : *mal-kōdēḡ* 'snare'.

§ 57. In Akk., just as in Heb., no semantic splits of the fundamental *maqtal* are attested. The semantic differentiations *maqtal* : *maqtīl*, and *maqtal* : *miqtal* are therefore to be considered as exclusively Arabic.

§ 58. The substantive value of the *m*-formations makes us consider the pass. part. *maqtūl* of Ar. as a relatively recent replacement of an old

<sup>17</sup> At any rate the corresponding masc. form \**maqtul* would have phonetically collapsed in Heb. with *maqtāl*.

*qatūl* (cf. Heb.) by the abstract *maqtūl*. For the attributive function of abstracts see above § 1. Cf. the fate of *qatūl*, originally itself an abstract noun (§ 6):

*qatūl* (verbal adj. or part.) : *qatūl* abstract > adj.

hence also: *qatūl* (verbal adj. or part.) : *maqtūl* abstract > adj.

Both forms, *qatūl* and *maqtūl* (with *ū*) were at the beginning nouns, but the gradual use of *qatūl* instead of *qatūl* was the cause of the creation of *maqtūl* as abstract noun corresponding to *qatūl*:

*qatūl* : *maqtūl* = *qatūl* : *maqtūl*

The old value of *maqtūl* is still transparent in Aram. where it serves to form nouns, abstract and concrete<sup>18</sup>, and in Heb. where *maqtūl* is also a substantive (as against the verbal adj. or part. *qatūl*). In Ar. there are also representants of *maqtūl* with abstract meaning, e.g. *ma'qūl* „intellect“.

This role of *maqtūl* as a reinforcement of *qatūl* (*qua* abstract) accounts for the decadence of *maqtūl*, a residuary category represented by relatively few examples in Ar. and gradually ousted by *maqtūl* which contains the additional feature of vocalic length.

In the form *maqtūl*, a reinforcement of *qatūl*, *ma-* has also become the chief exponent of the abstract value originally expressed by the lengthened degree.

§ 59. In a certain measure *ta-* was a competitor of *ma-* as regards the formation of verbal abstracts. As against *ma-* the prefix *ta-* served to reinforce verbal abstracts and infinitives rather than to express concrete meanings. The fundamental difference between the *m-* and the *t-* derivatives is that the latter are scarcely formed without a concomitant lengthening of the root vowel or the addition of the suffix *-at*. This fact proves that the function of *ta-* serving to underline the abstract value of a verbal noun must be *secondary*, viz. the result of the following development:

- 1) *ta-* deverbative prefix forming abstract nouns;
- 2) *ta-* accompanied by lengthening or suffix *-at* stressing the abstract value<sup>19</sup>.

3) *ta-* as a simple *phonetic prop* (without semantic value) used as expressive *enlargement* or „euphonic“ element, e.g. in Heb. roots with  $R_2 = \text{y, i}$  like *tqūmā* 'steadfastness', or in Akk. *littu* 'child' (Ar. *lidat*, Heb. *lēḏā*) reinforced in Akk. *tālittu*, Heb. *\*tōlēḏēḇ* 'descendence, posterity'.

<sup>18</sup> The form with short vowels *maqtīl*, *maqtul* became infinitives of the basic verbal class in Aram., the latter in the language of the Talmud of Jerusalem.

<sup>19</sup> The agreement of root vowels of two forms such as *qatūl* : *taqtūl* must of course not be considered as a proof that the prefix served *originally* as a means of *denominative* derivation without apophony.

§ 60. Of stage 1) there are hardly traces in the historical languages. In Heb. *taqtal* (*taqtīl*) is quite exceptional, cf. *tašbeš* 'tissue' < *šibbeš* 'weave', whereas e.g. *tahmās* 'kind of bird (impure)' and *tahrā* 'θώραξ, lorica' have no verbal etymology.

Stage 2) is well represented: *tilbošēḫ* 'garment' < *ilbaš*, or *tōšāḫ* 'outlets' > *išēḫ* with suffix *-at*. With lengthening of the root vowel: *tal-mād* 'pupil, disciple' < *ilmad*; *tazmūl* 'benefit' < *iizmōl*. With *-at* and lengthening: *tah<sup>al</sup>uchōḫ* 'procession' < *iēleḫ*; *ta<sup>al</sup>umā* 'hidden thing, secret' < '*-l-m* 'hide'; *tahpuchōḫ* 'perversity' < *iḥafōḫ*; *ta<sup>a</sup>sumōḫ* 'vigour, might' < '*-ṣ-m*; *ta<sup>a</sup>rubōḫ* 'pledge' < '*-r-b*. Also with the ending *-īm* whose abstract value is underlined by the prefix: *tah<sup>al</sup>u<sup>i</sup>m* 'diseases' cf. *ḡaiḡāḥal*; *tamrūqīm* 'kneading, massage' < *m-r-q*; *tamrūrīm* 'bitterness' < *iēmar*; *ta<sup>a</sup>tu<sup>i</sup>m* 'mocking', cf. *mḥa<sup>a</sup>teḡ* (part. of *piḫel*).

As regards stage 3) cf. the forms from roots with  $R_1 = \dot{\imath}$ ,  $\ddot{\imath}$  like *tēmān* 'South' or *tōšāb* 'resident'; from roots with  $R_2 = R_3$  *tēḫel* 'defilement, pollution' or *tēmēs* 'dissolution, melting away'. The corresponding basic verbs would be biliteral (*iēšēḫ* etc.).

In phase 3) forms with prefix *ta-* and those without are semantically equivalent, its use being determined only phonetically. „Expressivity“ consists simply in the phonetic swelling of word-volume.

§ 61. Forms with *ta-* oust those without the prefix if used in verbal abstracts (infinitives) of derived classes:

In Ar. *taqtīl* (*taqtīlat*) is the regular infinit. (*maṣdar*) of *qattala*.

In Eth. *taqtāl* is the abstract noun (> infinit.) of the intensive class.

In Heb. forms with *ta-* are according to Barth frequently associated with verbs of derived classes. Cf. for *hiḡil*: *ṭhillā* 'beginning', *tōḫeḫēḫ* 'expectation, hope', *tōchaḫaḫ* 'remonstration', *tōlēḫōḫ* 'generations, descendance'; *hiḫpa<sup>a</sup>el*: *ṭhinnā* 'imploring', *tah<sup>a</sup>nūnīm* 'supplications', *ta<sup>a</sup>nūz* 'pleasure', *ṭfillā* 'prayer', *ṭiflēšēḫ* 'fright'; *pi<sup>a</sup>el*: *ṭhillā* 'praise', *tanḫūmīm* (*tanḫūmōḫ*) 'consolations'; *nif<sup>a</sup>al*: *tardemā* 'sleep'; *pō<sup>a</sup>el*: *ta<sup>a</sup>lūlīm* 'arbitrary action; ill-treatment'.

In Aram. both *pa<sup>a</sup>el* and *eḫpa<sup>a</sup>al* have an infinit. with prefix *t-*.

In Akk. *taprīsu* is the action noun of *uparris*, *taqtālu* the action noun of *iptaras*.

The mutual independence of these developments is proved by the different values one and the same form represents in the different languages. Thus *taqtāl* belongs to the intensive in Eth., to the intrans.-pass. in Akk.

The prefix, originally designed for stressing the abstract function and nothing else (in order to avoid the semantic polysemy of the simple form), has thus become a characteristic feature of motivated (derived) formations.

§ 62. The fact that *ta-* is used optionally to enlarge *qatīl*, *qatūl* etc.

(> *taqtīl*, *taqtūl* etc.), i.e. forms independent of the root-vowel of the underlying verb, implies the same independence of the root-vocalism of the *ta*-formations. On the other hand the vocalic timbre of the prefix itself (*ta*-, *tī*-, *tu*-) seems to be conditioned by the nominal form undergoing the enlargement. Since *taqtāl*, *taqtīl*, *taqtūl* represent a reinforcement of *qatāl*, *qatīl*, *qatūt*, respectively, *qītāl* or *qūtūl* can be enlarged, in an analogous way, to *tiqtāl* or *tuqtūl*. E.g. Ar. *taẓṣāl* = *ẓaṣāl* 'end, stop'; *timṣāl* 'image' besides *miṣāl*; *tilfāq* 'two pieces of cloth sewn together' besides *lifāq*; *tilqā* 'meeting' besides *liqā*; *tuhlūk* besides *hulūk*, *maṣḍar* of *halaka* 'perish'. Function 2) of *t*- consists in stressing or rather in *selecting* the substantive meaning threatened by the attributive use of the Sem. abstract<sup>20</sup>.

Owing to the reinforcement, by means of *ta*-, of the abstract value of *qatīl*, *qatūl*, *qatīlat*, *qatūlat* etc. *ta*- gradually became the chief morph of the discontinuous morpheme *ta*- + *-at* (or lengthening). Hence the rule: *ta*- implies the addition of *-at* (or lengthening). This must have led to the elimination of the type *taqtāxl*<sup>21</sup>, scarcely represented in the historical languages.

§ 63. Akk. agrees with West Sem. in employing *ta*- as the exponent of substantive value to avoid the ambiguity of *parīs* (*parūs*) which are sometimes ambiguous (subst. or adj.):

*taprīs* (and *taprist*) : *talbīšu* 'garment' < *labāšu*; *tahliptu* 'equipment' < *ḥalāpu*; *taḥsistu* 'remembrance' < *ḥasāsu*; *takbittu* 'mass' < *kabātu*; *taklimtu* 'instruction' < *kalāmu*; *takpittu* 'intention' < *kapādu*; *tappilātu* 'surplus, supplement' < *napālu*; *tašliltu* 'repose, rest' < *šalālu*; *tašrihtu* 'screaming, shouting' > *šarāhu*; *targīgu* 'delinquent, criminal' < *ragāgu*;

*taprūs* (and *taprust*) : *taḥbābu* 'bellowing, bawling' < *ḥabābu*; *tamḥušu* 'fight' < *maḥāšu*, *meḥēšu*; *taphūru* 'assembly' < *paḥāru*; *tahluptu* 'covering, clothing' < *ḥalāpu*; *tamgurtu* 'agreement' < *maḡāru*; *taduntu* 'present, gift' < *nadānu*; *tapšuhtu* 'resting-place' < *pašāhu*; *taqrubtu* 'fight' < *qarābu*, *qerēbu*.

§ 64. As a rule verbal abstracts with the suffixes Ar. *-at*, *-ān*, *-a'*, *-ā* are from the diachronic point of view to be interpreted as enlargements of old root-nouns. Apophony in relation to the basic verb must be attributed to the root-noun, not to the suffix. Thus e.g. *īaqtulu* : *qīlat*, *qīlān* must be analysed as *īaqtulu* > *qīl* (attested or virtual) > *qīlat*, *qīlān*.

<sup>20</sup> Cf. the analogous role of *ma*- (Ar. inf. *maqtāt* for *qatāl* in Akk. and Heb.) and *mi*- (Ar. *miqtāt* for *qītāt*). The semantic relation of *miqtāl* to *maqtāt* is parallel to *qītāt* : *qatāt*. The form *qītāt* serves already in Sem. as name of instrument, Ar. *miqtāt* being partly its successor.

<sup>21</sup> Replaced by *taqtāxl*.

The above suffixes either *denote* abstract value or serve to *underline* it in forms already characterized as abstracts by the lengthened vocalism of R<sub>2</sub>. Such a cumulation of characteristics may lead to a weakening of the lengthened grade as a morpheme of derivation. A form like *qatālat* (< *qatāl* + *at*) is then perceived as an *-at*-derivative of *qatal* with the length functioning as an *additional* morph superimposed on suffixation, likely to penetrate into the inherited forms *qatalat* (> *qatālat*).

§ 65. There are clues pointing to an original vowel syncope in forms with *-t*-suffix. We find both *qatal* : *qatlat* (cf. above chap. II § 21, and concerning „broken“ plurals chap. VIII § 13), and *qatal* : *qatalt*.

The desinence *-at* of the fem. adj. is in many a case a late or even historical replacement of an older ending *-t*. In Ar. the latter is attested only in some monosyllabic words: *bintu* 'daughter', *uhtu* 'sister', *tintāni* 'two', *kiltā* 'both' (besides *\*bn-atu* and *\*tn-atāni* with prothetic *i*); *man* 'who' : fem. *mant*. It is not excluded that the Akk. distribution: *-tu* after light, *-atu* after heavy syllable, may prove an independent copy of what was once the rule in Common Sem.

In Heb. *-t* is better attested though being ousted by *-at* it chiefly survives in *secondary* functions. E.g. fem. adjective or participle in *-ā* versus noun in *-ēḥ*: *ayyereḥ* 'blindness', *ṣoneqeḥ* 'sprout, shoot'. Or fem. in *-ā* in the absolute, in *-ēḥ* in the construct state, e.g. *gḇirā* 'mistress', constr. *gḇereḥ*; *mamlāchā* 'kingdom', constr. *mamlēcheḥ*; similarly *ašmūrā* 'guard', *mašṣēbā* 'column', *tif'ārā* 'splendor' only in the abs. st., whereas the corresponding *-ēḥ*-forms occur both in the abs. and in the constr. state. But the opposition *-at* (abs. st.) : *-t* (constr. st.) is rigorous in the masc. numerals, cf. abs. st. *šlošā*, *'arbā'ā*, *ḥamišša*, etc., versus constr. st. *šlošeḥ*, *'arba'aḥ* and so on.

An opposition like masc. *qatilu* : fem. *qatiltu* continues an older one between *qatilu* and *qatiltu*, cf. chap. II § 20.

§ 66. The suffix *-(a)t* had both an inflectional and a derivational status. With adjectives in *-u*, *-atu* the latter form was *inflectional*, fem. gender being an obligatory part of the paradigm. By its origin, however, *-(a)t* is a *derivational* (originally abstr.) suffix and this function is continued in all Sem. languages. The suffix *-(a)t* serves to derive abstracts from adjectives. The fem. form of the adj. is therefore etymologically an *abstract noun* which has undergone the same semantic evolution as the other formatives of the fem. adjective.

The opposition between the masc. and fem. gender of the adj. probably first developed in attributes determining personal (hence also animate) nouns, the secondary meaning of the respective abstracts being *personal* (§ 3). Just as in the case of *-ā*, *-ā'* (cf. § 7) the old functional relation *adj.* →

*abstract noun* has been reversed: henceforth the primary function of *-(a)t* is inflectional, its secondary function is the forming of abstracts, hence also collectives. For the plural function of *-at* cf. chap. VIII § 16.

§ 67. In secondary derivatives formed from an adj. in *-u<sup>n</sup>/-atu<sup>n</sup>* there is of course no trace of *-t-*. This is the reason why even nouns in *-atu<sup>n</sup>* where *-atu<sup>n</sup>* performs a secondary function discard the *-t-* before a secondary suffix. Thus the adj. in *-iiu<sup>n</sup>* of fem. nouns of the form *qatīlatu<sup>n</sup>* is *qataliiu<sup>n</sup>*, e.g. Ar. *maḍīnatu<sup>n</sup>* > *maḍanīiiu<sup>n</sup>*<sup>22</sup>. Whatever the explanation of the subsequent change of timbre *i* > *a*<sup>23</sup>, it is in agreement with the identical change in cases like in Ar. *maliku<sup>n</sup>* > *malakīiiu<sup>n</sup>*. It is probably the model *qatīlatu<sup>n</sup>* : *qataliiu<sup>n</sup>* which accounts for the relation *qutāīlatu<sup>n</sup>* (fem. diminutives) : *qutaliiu<sup>n</sup>*.

Akk. *aššatu* 'wife' : *aššūtu* (derived abstract noun) etc. are to be explained in the same way (subtraction of *-at-*, addition of the derivational suffix *-ūt-*).

§ 68. Since *-at* and lengthening are equivalent morphological exponents of abstract nouns derived from adjectives, the former is considered as a „compensative“ counterpart of the latter, e.g. *qatīl* : *qatīl* = *qatīl* : *qatīlat*, thus Ar. *taqtīlu<sup>n</sup>* = *taqtīlatu<sup>n</sup>*. Just like lengthening *-at* serves not only to *express* abstract value but also to *underline* (*strengthen*) the abstract value inherent to the basic form. Compare also Ar. *ṭalib-at* 'thing being looked for', *naqim-at* 'vengeance' with their synonyms *ṭilbat*, *niqmat* where *-at* serves only as a reinforcement.

In Akk. verbal abstracts differ from the corresponding infinitives by the surplus of the suffix *-(a)tu*, cf.

preterite	infinitive	action noun	} Everywhere reinforcement of the abstract value by means of <i>-atu</i> has limited the old form to the function of infinitive.
<i>iprus</i>	<i>parāsu</i>	<i>parastu</i>	
<i>iptaras</i>	<i>pitrusu</i>	<i>pitrustu</i>	
<i>uparris</i>	<i>purrusu</i>	<i>purrustu</i>	
<i>ušapris</i>	<i>šuprusu</i>	<i>šuprustu</i>	
<i>uštapris</i>	<i>štutaprusu</i>	<i>štutaprustu</i>	
<i>ipparis</i>	<i>naprusu</i>	<i>naprustu</i>	

<sup>22</sup> In the case of a cumulation of the two morphemes originally forming abstracts, viz. *-at* and lengthening, the latter becomes subordinate to the former as a secondary feature (§ 64). Therefore it is discarded together with the suffix.

<sup>23</sup> Attributed by Brockelmann *GVG* I, p. 253 and p. 399, to dissimilation.

## Chapter VII. CASES AND DETERMINATION

§ 1. Class. Ar. and Akk. agree in opposing a diptotic pl. and dual to a triptotic sing. Cf. Ar.:

	sing.	pl.	dual.
nom.	<i>-u<sup>n</sup>, -atu<sup>n</sup></i>	<i>-ū(na), -ātū<sup>n</sup></i>	<i>-ā(ni), -atā(ni)</i>
acc.	<i>-a<sup>n</sup>, -ata<sup>n</sup></i>	<i>-ī(na), -āti<sup>n</sup></i>	<i>-ai(ni), -atai(ni)</i>
gen.	<i>-i<sup>n</sup>, -ati<sup>n</sup></i>	" "	" "

The „broken“ plurals (pluralia fracta) betray their recent origin (from an old collective sing.) by the fact that they are triptotic:

<i>kutubū<sup>n</sup></i>		<i>kitābū<sup>n</sup></i>
<i>kutubā<sup>n</sup></i>	like	<i>kitābā<sup>n</sup></i>
<i>kutubī<sup>n</sup></i>		<i>kitābī<sup>n</sup></i>

But certain categories of nouns have in Ar. (and Ugar.) a *diphtotic* declension in the sing. The latter is closely connected with the absence of nunation (mimation). The most striking detail, however, is the ending *-a* of the acc.-gen. sing. contrasting with the *-i* of the acc.-gen. of the regular pl. and dual (*-āti<sup>n</sup>, -īna, -aini*). The pronominal suffixes have nearly always the value both of gen. and of acc. It is probable that the regular, i.e. triptotic declension of the sing. is an innovation due to a split of an old ending *-i* of the acc.-gen. into *-i* (gen.) and *-a* (acc.). The sing. is as a rule the point of the maximal differentiation of case forms.<sup>1</sup> On the other hand the apophony *i u > a* offered a structural possibility for such a split.

§ 2. Starting from an original two-case system of the sing., nom. *-u*, oblique case *-i*<sup>2</sup>, we obtain a merger of these two endings after a „laryngeal“ (symbol ‘):

sing. nom.	<i>-u *-'a (I)</i>	e.g.	<i>kalb-u *zar'a (I)</i>
sing. oblique	<i>-i *-'a (II)</i>		<i>kalb-i *zar'a (II)</i>

<sup>1</sup> Or rather: in the sing. the number of different case forms is never inferior to that of the pl. or dual. Cf. *Infl. Cat. of I. E.* p. 200.

<sup>2</sup> Cf. the O. Fr. two-case system: *cas sujet* (= nom.) and *cas régime* (oblique case, both adverbial and adnominal).

Whereas *-a* (I) has the function of *-u* (cf. *kalb-u*), *-a* (II) is interpreted either as *-i* (cf. *\*kalb-i*) or as *-a*. Hence the split *kalb-i* (gen.): : *kalb-a* (acc.)<sup>3</sup>.

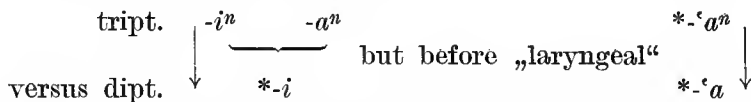
As regards the hierarchy of functions of the old acc.-gen. *kalbi*, the opposition *nom.* : *gen.* dominates the contrast *nom.* : *acc.* The *nom.* and the *gen.* are under certain semantic conditions commutable within the same syntactical slot as determinants of a noun, i.e. may be opposed directly (e.g. Lat. *deus faber* : *deus fabri*). The contrast *nom.* : *acc.*, on the other hand, represents a syntactical relation between the subject and the determinant (complement) of the verbal predicate, a relation which is reached only via the conversion of active to passive construction. Therefore the *gen.* function of *kalbi* was primary with regard to the *acc.* function which was secondary. Hence *-i* for the *gen.*, *-a* for the *acc.*

§ 3. After the rise of the three-case system two groups of forms still preserved the old diptotic declension:

- 1) The inherited pl. and dual.
- 2) The sing. of certain categories of nouns.

As regards 1) cf. above the statement about the tendency of differentiation in the sing. which does not always extend to the pl. and the dual. Syncretism and neutralization are characteristic of founded forms.

Concerning 2) the exponents of *nom.*: oblique case are not *u* : *i* (as under 1), but become *u* : *a*. This vocalism is closely associated with the absence of nunation in the diptotic noun as against its presence in the triptotic noun. Cf. the original distribution:



This difference prevents the introduction of the split *i/a* into the inflexion of the diptota. But the change *\*-i* > *-a* i.e. the generalization of *-a* must be explained by the *subordinate status* of the dipt. nouns (representing at the same time categories deprived of nunation)<sup>4</sup> and the relation *i/a* : *a* overriding the relation *i/a* : *i* *gen.* (since *-a* was admissible after any consonant, „laryngeal“ or not).

§ 4. The categories of dipt. nouns attested in Class. Ar. bear out their postulated status. They may be divided into 1) proper names and 2) abstracts.

- 1) Personal names, both masc. and fem., which *are or seem to be*

<sup>3</sup> The forms *zaru*, *zari* are posterior to the shortening of long vowels (*-ū*, *-ī*) in closed syllables, cf. chap. II § 18.

<sup>4</sup> Provided with article or determined by a *gen.* (or *poss. pronoun*) tript. nouns lose their nunation; therefore, under the same conditions, dipt. nouns become triptotic.



derived from appellatives or adjectives, are diptotic. Cf. 'agrabu' 'scorpion': 'agrabu (man's name); the type *qatal* as in 'umaru, zufaru, or fem. names having the form *qatāl* like *qaṭāmu*, *ḡalābu*<sup>5</sup>; the type *qatalān*, *qutlān*, e.g. *ḡatafānu*, 'uṭmānu. Personal names having the form of „perfectives“ (*qattal*, *qutīl*) or resembling a form of the „imperf.“ are diptotic, thus *šammaru*, *ḡuribu*, 'aḡmaḡu, 'iaziḡu. Foreign names, both masc. and fem., are as a rule also diptotic: 'āḡamu, 'ibrāḡimu, 'iṣḡaqu, ḡā'uḡu, 'iaḡiā, za-kariḡiā'u<sup>6</sup>.

Ugar. seems to confirm the diptotic declension in personal names with -ān-, as in nom. *Nūrānu*, *Burḡānu*, gen./acc. *Nūrāna*, *Burḡāna*, cf. Gelb *op. cit.* p. 72 following Liverani RSO 38 (1963) p. 131 ff.

Certain geographical names are also diptotic: *makkatu* 'Mecca', *miṣru* 'Egypt': cf. also *saḡaru*, name of a part of the hell.

Certain other categories are treated like proper names, thus the names of grammatical forms. E.g. *ḡaznu baitiṣ* *fa'lu* 'the form of (the word) *baituṣ* is *fa'lu* (*qatīl*)'.

§ 5. 2) Fem. nouns or adjectives with suffixed (not radical) -ā'u, -ā (*qatīlā'u*, *qatīlā*, *qutīlā*) are diptotic. Similarly the masc. adj. 'aḡṭalu (fem. *qatīlā* or *qutīlā*), and *qatīlānu* (fem. *qatīlā*).

Now all these forms (*qatīlā'u*, *qatīlā*, *qutīlā*, 'aḡṭalu, *qatīlānu*) are originally abstracts (> appositions > adjectives, cf. chap. VI § 7). Cf. also the use of -ā'u, -ā in forming „broken“ plurals (*qatīlā'u*, 'aḡṭilā'u, *qatīlā*, *qatīlā*, all diptotic), originally collectives stemming from abstract nouns (*infra* chap. VIII § 5). The plurals 'uḡṭalu and 'uḡḡaru follow the diptotic flexion of the corresponding sing. 'aḡṡṡalu/ūlā and 'āḡḡaru/ūḡḡā, formally elatives like 'akḡaru/kubḡā.

Numerals in -at used as abstracts are also diptotic, e.g. *ṭalātatu niṣfu* *sittata* 'three is the half of six'.

§ 6. What is common to 1) and 2) is the lack of nunation (mimation) entailing diptotism. But the absence of nunation, originally a kind of article<sup>7</sup>, is easy to understand. Proper names and abstracts behave in much the same way e.g. in English, being normally used without article (definite or indefinite). Such an explanation might be objected to by pointing out that abstract nouns are as a rule used in Ar. with nunation

<sup>5</sup> These names correspond to the masc. *qatīl* (chap. VI §§ 8, 29).

<sup>6</sup> *Triptotic* inflection is, for unknown reasons, proper to some personal names of the structure *qutl*, *qatīl*, e.g. *nūḡuṣ* 'Noah', *lūtuṣ* 'Lot'. On the other hand the hesitation between *hindu*, *ḡaḡdu* and *hinduṣ*, *ḡaḡduṣ* etc. (womens' names) and some forms with nunation like *sinānuṣ*, *riḡṡānuṣ* may go back to a younger layer of appellatives (nicknames) used as personal names. Cf. the chronological difference between Fr. *Sudre* and the form with article *Lesueur*, both from Lat. *sūtor* 'shoemaker'.

<sup>7</sup> Whether „definite“ or „individualizing“ is here beside the point.

except those specified above. The state of Ar. would be therefore like that of the French language where abstract nouns, as against proper names, require the definite article. Class. Ar. would thus represent a historical stage where the *old* article (nunation) has already extended its original domain (cf. French versus English). But the special treatment of *qatlā'u*, *qatlā*, *qutlā*, *'aqtalu*, *qatlānu* must be accounted for.

The relations *'aqtalu* : *qutlā* (relative), *'aqtalu* : *qatlā'u* (adjectives denoting colours, physical defects etc.) and *qatlānu* : *qatlā* came into existence through the partial replacement of adjectives representing old abstracts (appositions) *'aqtalu*, *qatlānu* by new abstracts (appositions) *qutlā*, *qatlā'u*, *qatlā*, respectively. This fact permitted a formal differentiation of attributes according to the gender of the determined noun. The old form was used with masc. nouns (hence also independently)<sup>8</sup>, the recent form was restricted to fem. nouns.

The result of the above development, of the rise of distinction of gender, was the change of the *value* of the respective forms. Henceforth they were *adjectives* which as such could be used in *secondary function* as abstracts. We have to do with a reversal of the hierarchy of functions, with a shift from I abstract noun → II apposition to I adjective → II abstract noun<sup>9</sup>. At the same time the fem. gender of *qatlā'u*, *qatlā*, *qutlā* becomes intelligible.

§ 7. The formal consequence of this state of affairs was the impossibility of an extension of nunation to abstracts like *qatlā'u*, *qatlā* etc. since they were formally identical with the corresponding fem. adjectives. On the other hand adjectives like *'aqtalu* : *qatlā'u* and so on proved immune to such pressure, the structural relation between the masc. and the fem. form being exceptional. Once this relation was zero : -at both *'aqtalu* and *qatlānu* could take nunation, e.g. *'armalū* 'widower' : *'armalatu* 'widow'; *nadmānu* 'drinking-companion' : *nadmānatu*<sup>10</sup>.

As regards numeral abstracts of the type *sittatu* they did not share the fate of the other abstracts owing to their divergent semantic content (numeral versus nominal or verbal).

The testimony of the adj./abstracts *'aqtalu*, *qatlā'u* is therefore double. The use of the above forms as appositions must go back to a period when

<sup>8</sup> Thus in the case of the relative *'aqtalu*/*qutlā* the form *'aqtalu* is invariable as regards gender (and number), if it is not determined, e.g. *fāṭimatu 'afḍalu* 'F. is very good', *hiṣa 'afḍalu nisā'i* 'she is the best of women', but *hiṣa fuḍlā 'nnisā'i* (determined); *ḥuṣāṣiatu 'aṣḡaru* 'a smaller pebble', etc.

<sup>9</sup> I and II stand for primary and secondary function, respectively.

<sup>10</sup> There are of course occasional hesitations, e.g. *'afḍalu* and *'afḍalu* '(species of) falcon', depending on whether the etymological connection with *'afḍalu*, *jadlā'u* is still perceived or not.

abstract nouns did not take nunation (mimation). The spread of the latter to abstracts must have taken place after the forms in question have become adjectives.

§ 8. Lack of nunation in „broken“ plurals of *quadriliterals* is due to the concurrence of two factors: the aberrant (quadriliteral) structure of the root plus the original abstract (> collective) value. The isolated position of the types *qatālilu*, *qayātīlu*, *qatā'īlu* prevents the spread of nunation. Cf.

- |                                               |                                                                        |
|-----------------------------------------------|------------------------------------------------------------------------|
| 1) sing. of trilateral roots ( <i>q-t-l</i> ) | 3) sing. of quadriliteral roots ( <i>q-t-l-l</i> )                     |
| 2) „broken“ pl. of <i>q-t-l</i>               | 4) „broken“ pl. <i>qatālilu</i> , <i>qayātīlu</i> ,<br><i>qatā'īlu</i> |

Whereas nunation is introduced into 2) (except in the types with suffixal *-ā*, *-ā'u*), no valid proportion 1) : 2) = 3) : 4) can be established, whatever type of „broken“ pl. is chosen. I.e. there is no possibility of introducing nunation into 4) on the model of 2) or 3).

§ 9. The construction of the Sem. numerals must be explained by the familiar phenomenon of secondary differentiation of gender. The isolated cardinal numbers Ar. *mi'atu*<sup>n</sup> and *'alfu*<sup>n</sup> govern the gen. sing. of the noun: *mi'atu raḡulīn*, *'alfu lailatīn* like e.g. *kullu raḡulīn* 'all men'. But the digits 2—10 were in Sem. partially replaced by corresponding nouns in *-at*<sup>11</sup>, the old forms (without *-at*) continuing to function as determinants of fem. nouns. Cf. the origin of opposition like Ar. *'aqtalu* : *qatlā'* or *qutlā* or of Eth. *raḡīb* : *raḡāb* (chapter VI § 8, 29) where, however, fem. gender has been assigned to the recent forms (*qatlā'u*, *qutlā*, *qatālu*).

Being nouns the forms in *-at* governed the gen. pl. (formally: acc.-gen. pl.) of the determined masc. noun, hence also the same government of fem. nouns by the old digits (without *-at*)<sup>12</sup>.

§ 10. The *fundamental* series:

*talāḡātu* + ... *-īna* (masc.)      *talāḡtu* ... *-ātīn* (fem.)<sup>13</sup>

exerted its influence on two *derived* series, one of them comprising the decades 20—90 (derivatives in the narrower sense), the other the numerals 11—19 (compounds).

As regards the decades their construction was the result of the pressure of digits governing the gen. pl. on the corresponding decades governing the old gen. sing., e.g.

<sup>11</sup> Both as determinants of masc. nouns and as independent numeral abstracts, e.g. *sittatu* 'six' (as pure number). Cf. the Slav. digits from 5 on: *peti*, *šest*... Originally abstracts (collectives) they govern the gen. pl. of the following noun. Cf. *triad*, *pentad* of.

<sup>12</sup> Since the fem. gender (= marked) is dominated by the masc. gender (= neutral or unmarked).

<sup>13</sup> „Broken“ plurals, being an innovation of South Sem., did not play a role during the Common Sem. rearrangement of the cardinal numerals.

*talātatu + ... -īna* (masc.)

*talāīūna + ... -i<sup>n</sup>* (-*a<sup>n</sup>* after „laryngeal“)

Owing to the derivational status of *talātūna* and the ambivalence of *-īna* (acc./gen.) the timbre *a* was generalized in the determined noun, the contrast between *-īna* and *-a<sup>n</sup>* including that between *-īna* and *-i<sup>n</sup>*. The fem. nouns followed suit, just as in the case of digits. As against the gen. of *mi'atu kalbi<sup>n</sup>*, *'alfu kalbi<sup>n</sup>* the group *talātūna kalba<sup>n</sup>* contains a *pseudo-acc.* due to the *motivated status* of *talātūna*.

§ 11. Whereas the „accusative“ in *-a<sup>n</sup>* appearing also after the numerals 11—19 is accounted for in the same way, the form of the numeral itself, with both members of the compound ending in *-a<sup>14</sup>*, is less clear.

One would expect, at first, masc. *\*talātatu \*'ašari \*kalbi<sup>n</sup>* (with the preservation of the old form, without *-at*, of the decade). But owing to the fact that it is the noun which semantically *governs* the numeral, the apparently reverse relation being only a phenomenon of *dominance*<sup>15</sup>, language seizes upon the opportunity to interpret an accidental identity of desinences as a syntactical agreement. Already the identity of the endings of *'ašari* and *kalbi<sup>n</sup>* made *'ašari* formally dependent on *kalbi<sup>n</sup>*, a relation immediately copied by the fem.: *\*talātu \*'ašr-at-i \*kalb-at-i<sup>n</sup>*. Ceasing to represent the construct state *'ašari* (*'ašrati*) became the attribute of *kalbi<sup>n</sup>* (*kalbati<sup>n</sup>*) whereas *talātatu* (*talātu*) continued to function in the construct state (*talātatu + 'ašari kalbi<sup>n</sup>*). Afterwards the replacement of the gen. by the pseudoacc. in *-a<sup>n</sup>* entailed the corresponding transformation of the numeral agreeing in case with the noun: *\*talātatu 'ašara kalba<sup>n</sup>*, *\*talātu 'ašrata kalbata<sup>n</sup>*. Finally the inflection:

nom. *\*talātatu 'ašara kalba<sup>n</sup>*

gen. *\*talātati 'ašara kalba<sup>n</sup>*

acc. *talātata 'ašara kalba<sup>n</sup>*

led in the acc. to the identification of the endings of *talātata* and *kalba<sup>n</sup>*, interpreted as the full agreement of the numeral with the noun (fem. *talāta 'ašrata kalbata<sup>n</sup>*). Since in all three syntactical functions (nom. gen. acc.) the noun had the same form *kalba<sup>n</sup>*, *kalbata<sup>n</sup>*, the governed numeral necessarily became unchangeable generalizing the ending *-(at)a* of the noun. The noun (*kalba<sup>n</sup>*, *kalbata<sup>n</sup>*) is *only formally* an acc., whereas with units and decades, which are inflected, it is perceived as standing in the oblique case (gen. pl. or „acc.“ sing.).

<sup>14</sup> Masc. *talātata 'ašara*, fem. *talāta 'ašrata* etc.

<sup>15</sup> Which is subordinate to semantic government, cf. chap. II, § 5 the example of the Fr. adj. Cf. also Russ. *dva rublja*, *dve kopejki*, where the gender of the numeral is *governed* by the noun, with the case of the latter dominated by the numeral.

§ 12. In spite of the loss of case endings and considerable variations of construction Heb. agrees with Ar. in the following details:

- 2—10 in construct state (pointing to a following gen.) + pl. of the noun<sup>16</sup>;  
 11—19 (abs. state) + sing. of the noun<sup>17</sup>; notice the construct state of the units of the fem. forms (*ḥameš* 'ešre etc.) which could represent an archaism;  
 20—90 (abs. state) + sing. of the noun<sup>17</sup>;  
 100 in construct state (= following gen.) + sing. of the noun.

In spite of the insufficient data and the hesitations of Akk. (v. Soden *GAG* p. 194 f.)<sup>18</sup> the partial agreement of Heb. and Ar. and the probable archaism of the latter allow of forming an idea of the construction of the Sem. cardinal numerals. Since however the rather complicated picture it offers in Ar. is a consequence of the competition of the numeral abstracts in *-at* with the original series of numerals, a future inquiry into the functions of the two series in Akk. may produce corrections and readjustments of the reconstruction proposed above.

§ 13. One of the riddles still remaining unsolved is the form of the numeral „ten“. Cf. Ar. *'ašaratu<sup>n</sup>* (masc.): *'ašru<sup>n</sup>* (fem.). What one would expect is rather the reverse, fem. *\*'ašaru<sup>n</sup>* : masc. *\*'ašratu<sup>n</sup>*, cp. *maliku<sup>n</sup>* : *\*malkatu<sup>n</sup>* (Heb. *malkā*), or *qitalu<sup>n</sup>* : *qitlatu<sup>n</sup>*, *qutalu<sup>n</sup>* : *quṭlatu<sup>n</sup>* (*infra* chap. VIII, § 13). The expected vocalization is attested in the compounds 11—19, (*ṭalātata*) *'ašara*, (*ṭalāṭa*) *'ašrata*.

It is in the -teens (11—19) where owing to the agreement (*'ašara* = *kalba<sup>n</sup>*, *'ašrata* = *kalbata<sup>n</sup>*) the original root-forms proper to the two genders are revealed: *'ašar*- masc., *'ašr*- fem. This distinction is introduced in the numeral „ten“ in spite of its being subject to the general rule obligatory for all digits (*-at*- masc., zero with fem. nouns). Thus *'ašru<sup>n</sup>* (fem.), *'ašaratu<sup>n</sup>* (masc.) stand for an older relation *\*'ašaru<sup>n</sup>* : *'ašratu<sup>n</sup>*. I.e. *'ašar-at-u<sup>n</sup>* is built on *'ašar-a* by adding *-at-*, and *'ašr-u<sup>n</sup>* on *'ašr-at-a* by subtraction of *-at-*; cf. *ṭalāṭa* > *ṭalātatu<sup>n</sup>*, and *ṭalātata* > *ṭalātu<sup>n</sup>*.

§ 14. Let us once more stress the fact that all explanations neglecting the fact that cardinal numbers are always *governed* by the determined nouns, even when structurally *dominating* them, are necessarily incorrect.

§ 15. Although nunation (mimation) has in a certain measure influ-

<sup>16</sup> This construction is preferred if the counted objects are determined. Otherwise the noun is treated as an apposition (absolute state of the numeral), or the numeral as an attribute following the noun.

<sup>17</sup> Only with nouns frequently determined by cardinal numerals. In other cases the noun, put in the pl., precedes the numeral.

<sup>18</sup> At any rate the usual Akk. construction, with the numeral (from 3 on) losing its flexion and the following noun in the pl. being independent, must be the result of a simplification of an older more complicated state of affairs.

enced declension, that is the distribution of diptotic and triptotic inflection, the Sem. function of the enclitic elements *-n* (*-m*) in the sing., *-na* (*-ma*) in the pl., *-ni* in the dual is still an open problem. At any rate the order *case ending* + *nunation* (*mimation*) excludes the possibility of this nasal element being a *suffix*. We have to do with a *pronominal enclitic* whatever its original value.

It is true that in Class. Ar. it may be in most cases considered as a kind of indefinite article. But even here it is often, according to Reckendorf (*Arab. Syntax* p. 194 ff.) void of meaning like the *definite* article of many modern languages. Within Ar. itself two stages are distinguishable, the older approximately corresponding to the use of the Engl., the younger to the use of the Fr. definite article (§ 6). The fact of the prehistorical *spread* of nunation speaks against an original value of *indefinite* article. On the contrary it must be compared with what we witness not only in the European languages, but also with the semantic decadence of the Aram. definite article *-ā* corresponding to Heb. *hā-*, or with the functional degradation of Akk. *mimation*, the counterpart of Ar. *nunation*.

§ 16. The functional decline of Ar. *-n* as definite article is proved by the fact that its recent competitor *al-* has not yet fully occupied the syntactical slots where the definite article is least necessary and where *nunation* may still be found to preserve its old function. *Nunation* and *al-* are therefore within certain limits, to some extent, in complementary distribution, *nunation* representing the *lack of the definite article* *al-*<sup>19</sup>.

Now the last layer of nouns to take the definite article are those determined by their semantic content („sky“, „earth“, „sun“, nouns used in the generic sense, mass nouns, abstracts, etc.)<sup>20</sup>. It is here that we still witness a competition between old and recent constructions, cf. *ḡadu<sup>n</sup> lakum rahnu<sup>n</sup>* ‘the day of to-morrow is for you a pledge’, but *lammā kāna mina lḡadi* ‘when the next day came’; *dūna āmin muḡbili<sup>n</sup>* ‘before the following year’, but *lammā kāna l’āmu lmuḡbilu* ‘when the following year came’.

Other examples: *bu’aida samā’i<sup>n</sup>* ‘not far from the sky’; *arḡu arḡi<sup>n</sup>* ‘the width of the earth’; *man ra’ā mina nnāsi šamsa<sup>n</sup> bi’iṣā’i iṭṭūfu* ‘who among men has seen the sun revolve at evening?’; *kullu raḡūli<sup>n</sup>* ‘the totality of man(kind)’; *afḡaluhum raḡūla<sup>n</sup>* ‘the most excellent among them as regards mankind’, *ḡahabu<sup>n</sup>* ‘gold’; *murūḡḡatu<sup>n</sup>* ‘manliness’; etc. In these semantic categories an *indefinite* article could never have replaced an original *lack* of article. *Nunation* can here represent only an original *definite* article restricted to the neutral value „non-definite“ (not the negative value „indefinite“!) by the new expressive form *al-*.

<sup>19</sup> Or of any other determination, either by the gen. or a pronominal suffix.

<sup>20</sup> Cf. Engl. *man* (is mortal), *gold* (is a metal), *cruelty*... as against Fr. *l’homme* (est mortel), *l’or* (est un métal), *la cruauté*, etc.

§ 17. As long as nunation functioned as definite article, indefinite meaning was simply rendered by zero. It is the ousting of nunation by *al*-, its restriction to the slot „non-definite“, which caused the spread of *-n* to the slot „indefinite“, the latter function being only a species of „non-definite“<sup>21</sup>.

Thus the apparently indefinite value of Ar. nunation is only a special function of the overall value „non-definite“ going back to an original value „definite“. The history of this development is reflected in the successive chronological layers of personal names. Although masc. names like *al-ḥasanu*, *al-ḥarītu* are younger than names without the article *al*-, e.g. *ḥasanu<sup>n</sup>*, *muḥammadu<sup>n</sup>*, the latter type is on its part the successor of a type without nunation, cf. above § 4 (*zafaru* etc.). Within the chain 1. *zafaru* → 2. *ḥasanu<sup>n</sup>* → 3. *al-ḥasanu* the relation 2 : 1 is the same as 3 : 2, i.e. definite article versus its absence. The conclusion is that the nunation of the type *ḥasanu<sup>n</sup>* had at the time when such names were first created, the value of a definite article. The use of an indefinite article in a proper name would have been nonsensical. In „analytical“ languages it simply does not occur.

§ 18. Although from the standpoint of general linguistics the hypothesis of the indefinite value of nunation must be rejected, there seems at first glance to exist the possibility of assigning *-n* another function, neither indefinite nor definite, but *individualizing*. It might have served to change generic into individual value, e.g. (Ar.) *raʿulu* ‘man’ (generic as in *man is mortal*) : *raʿulu<sup>n</sup>* ‘a man’ or ‘the man’. But as a rule forms with such a value are derivatives provided with suffixes preceding the inflectional desinences. Nunation (mimation) being attached to *inflected* form must be an *enclitic*, probably pronominal, element.

The lack of parallelism between the treatment of Ar. sing. *-n* and pl. *-na* (dual *-ni*) is instructive. E.g. *ḥādīmu<sup>n</sup>* ‘servant’ : *al-ḥādīmu* ‘the servant’, but *ḥādīmū<sup>na</sup>* ‘servants’ : *al-ḥādīmū<sup>na</sup>* ‘the servants’ (with *-na*), dual *ḥādīmā<sup>ni</sup>* : *al-ḥādīmā<sup>ni</sup>*. The preservation of *-na* (*-ni*) in spite of the definite article is easily accounted for by the zero-value of *-n* in the sing., denoting the absence of the article. The structural relation between sing. and pl. became \**ḥādīmu* : *ḥādīmūna*, with *-na* as a redundant enlargement of the pl. morpheme *-ū*. Hence also *al-ḥādīmūna* and, analogically, in the dual: *ḥādīmāni*, *al-ḥādīmāni*<sup>22</sup>.

<sup>21</sup> In structural terms „definite“ may be called *positive* (β), „non-definite“ *neutral* (Γ), and „indefinite“ *negative* (B). The material identity of Γ (neutral) and B (negative), both in phonology and in morphology, is a frequent and well-known phenomenon.

<sup>22</sup> In this way the pl. and dual are expressed by lengthening (*-ū*, *-ī*, *-ā*, *-ai*) plus the *redundant* trait *-na* (*-ni*). The nasal morph is redundant since it is

§ 19. Totally different is the origin of the *South Ar.* nunation (the „nunation of the determined state“), manifestly stemming from an old „individualizing“ or „singulative“ suffix *-ān*-<sup>23</sup> attested in Akk. (v. Soden *GAG*, p. 70), also in Ar. (*'insu*<sup>n</sup> : *'insānu*<sup>n</sup>). The South Ar. nunation is to a certain extent the functional successor of the Sem. nunation (mimation). Its phonetic form is *-ān*. Originally attached to the root and *preceding* the inflectional endings it served afterwards to reinforce and then to replace the inherited nunation (which had disappeared). Taking over in its stead the function of the definite article, *-ān* is attached to the inflectional endings of the pl. and dual.

Starting from the original system:

indeterminate state	<i>kalb-u</i>	individualized	<i>kalbān-u</i>
determined state	<i>kalb-u<sup>n</sup></i>	„	<i>kalbān-u<sup>n</sup></i>

a new distribution was reached after the disappearance of final syllables:

indeterminate state sing.	<i>kalb</i>	pl.	<i>-āt</i>	dual	<i>-ān (-ain)</i>
determined state	„ <i>kalbān</i>	„	<i>-āt-ān</i>	„	<i>-ān-ān (-ain-ān)</i>

It is the change of the status of *-ān*- (suffix > article) which explains the new order of morphemes : instead of preceding *-āt*, *-ān (-ain)* the morpheme *-ān* is attached to the inflected form of the noun.

The probability of *-ān* being originally a reinforcement of the inherited nunation is enhanced by the reconstruction explaining Sem. *-n* as the functional predecessor of the North Ar. article *al*-.

§ 20. The same suffix *-ān*- losing its individualizing (singulative) function became in Akk. an essential component of the pl. morpheme.

Original state:

sing.	<i>parsu</i>	singulative	<i>parsānu</i>
pl.	<i>parsū</i>	pl.	<i>parsānū</i> <sup>24</sup>

The gradual obliteration of the difference *parsu* : *parsānu* and the falling into disuse of the latter form entailed the corresponding semantic merger between the pl. forms. According to the principle mentioned in

dropped under certain conditions, in the construct state and before possessive suffixes. The difference of treatment between *al-ḥādīmu* (without *-n*) and *al-ḥādīmūna*, *al-ḥādīmāni* (with *-na*, *-ni*) confirms the structural rule that redundant features (i.e. morphs with zero value) are characteristic of *motivated* formations (pl. or dual versus sing. in the present example). Swelling the motivated form by contraposition to the basic form redundant features perform an *expressive* function in the strictly linguistic sense. *F'* (structure) plus redundant morph is more *expressive* than the semantically identical *F*.

<sup>23</sup> Abstract *-ān*- > singulative *-ān*- like abstract *-at* > singulative *-at* (chapter VIII, § 14).

<sup>24</sup> The length of the final vowel of *parsānū* is frequently attested in O. Bab.



n. 22 it was the pl. form enlarged by the redundant morph *-ān-* which prevailed. Therefore the above state was replaced by the new relation: sing. *parsu*/pl. *parsānū*, with the old pl. form *parsū* restricted to a secondary, viz. collective, function<sup>25</sup>.

Although similar developments have taken place in Aram., cf. the pl. in *-ān-in*, *-ān-ē*, etc. it is very doubtful that one has to do here with an already Protosem. phenomenon<sup>26</sup>.

§ 21. Between Classical Ar. and Akk., the only Sem. languages to continue the original case-system, there is in spite of the general agreement of forms and functions an important difference. Akk. has a case-form with zero-ending employed 1) in the construct state; 2) as nominal predicate; 3) as vocative. E.g. *bīt šarrim* 'the house of the king'; „...*šar*“ = '...is king'. Moreover, proper names are as a rule deprived of endings.

The lack of parallelism between the Akk. absolute state (*status rectus*) and the construct state must be explained by the laws of syncope. The difference between *\*qatalu* > *qatlu*, but *\*qatalatu* > *qataltu* proves that the expulsion of the vowel takes place in the syllable preceding the morphological juncture of *\*qatal-u*, *\*qatalat-u*, hence *qataltu* and not *\*qallatu*. In the construct state the short vowel preceding the juncture separating the two members is lost. Hence *\*qatalu* > *qatal*, whereas *\*qatalatu* > *qatlat* offers the additional syncope of the antepenult.

Owing to the subordination: absolute form (basic) → construct form (founded), the relation *qatlu* : *qatal* is transferred to nouns like *pagru* „corpse“ : *pagar*, *šipru* 'writing' : *šipir*, where the basic form has never contained an internal short vowel.

§ 22. Similarly in Aram., where the old „determined“ state in *-ā* has become the normal (fundamental) form of the noun, the syncope of the pretonic vowel has entailed the merger of the types *qa<sup>x</sup>ta<sup>x</sup>l* and *qa<sup>x</sup>til* in the *-ā* form, hence also:

I *qa<sup>x</sup>til* : „determined“ *qatlā*, *qitlā*, *qutlā*, „indeterminate“ *q<sup>e</sup>tal*  
 II *qa<sup>x</sup>ta<sup>x</sup>l* : „determined“ *qatlā*, *qitlā*, *qutlā*, „indeterminate“ *q<sup>e</sup>tal*, *q<sup>e</sup>til*, *q<sup>e</sup>tul*.

Neither the vocalism of the first nor that of the second R of the „indeterminate“ form corresponds to that of the first and the second R of the „determined“ form. Therefore *q<sup>e</sup>tal* *q<sup>e</sup>til*, *q<sup>e</sup>tul* become simple allomorphs of the „indeterminate“ form in II, hence also in I, with vocalism regulated by the phonetic neighbourhood.

<sup>25</sup> As proved by the semantic opposition between *šarrānū* and *šarrū*, *ilānū* and *ilū*. The precariousness of the purely quantitative opposition in Akk. was the cause of the disappearance of the shorter forms.

<sup>26</sup> The ending *-ānu<sup>n</sup>* with concomitant *ablaut* („broken“ pl.), as in Ar. ‘*abdu<sup>n</sup>*’ : ‘*ibdānu<sup>n</sup>*’, *fārisu<sup>n</sup>* : *fursānu<sup>n</sup>* ‘rider’ must be of course kept apart.

§ 23. The loss of the Akk. case-endings of the *construct state* created a new inflectional category, viz. *monoptotic* nouns, not declined in the sing. In the construct state it is the syntactical context which determines the case-value of the noun-form, whereas the relation between the two members is predictable (any case plus gen.).

It is conceivable that the syncope was caused by the functional weakening of the case-endings of the construct state once the syntactical group noun + gen. was perceived as a *compound* versus the new construction noun + *ša* + gen. Since a compound represents a single word, not a syntactical group, only *final* inflectional elements are expected. This is borne out by the endings of the pl., cf. examples like *durug šadâni* 'mountain-paths' = (*durug* + *šadi*) + *âni*, *pagar muqtablîšunu* 'the bodies of their warriors' = (*pagar* + *muqtabli*) + pl. + pronominal suffix. A construction like *pagrî qurâdêšunu* 'the bodies of their heroes' represents the older type. Similarly, the construct state may serve as a basis for derivatives: *arad šarri* 'servant of the king' > *aradšarr-ûtu* 'king's service'.

In Akk. compound names monoptosis of the first member must have installed itself early (for semantic reasons) before invading the domain of foreign names.

In the predicative use the form of the noun is the same as in the construct state because of its fusion with a following personal pronoun. E.g. *šarr* 'he is king' owing to *šarr-âku* 'I am king', *šarr-âta* 'you are king', *šarr-âtunu* 'you are kings' etc., where the ending of the nom. has been suppressed, cf. the inflection of the stative (chap. III, § 7).

§ 24. The short form is used also in the vocative function, *šar* 'O king!', *šamaš* 'O sun!'. It is the rise of the „pure stem“ in the construct state which made possible the renewal of the voc.: *šar*, *šamaš* instead of *\*šarru*, *\*šamšu*, cf. Ar. Since the construct state was based on the absolute state, the construct form of the nom. admitted a double interpretation:

a) as allomorph of the case-form in *-u* (just as for the case-forms in *-a*, *-i*);

b) as representing the secondary function of the case-form in *-u*, i.e. the voc.

Thus the split between nom. and voc. consisted in the association of the secondary form with the secondary function (voc. = zero-ending), whereas the zero of the noun in the construct state was purely mechanical. For this type of differentiation see chap. II § 20 (n. 9).

## Chapter VIII. GENDER AND NUMBER

§ 1. If *grammatical* gender is as a rule a matter of government and agreement<sup>1</sup>, then one must admit that Class. Ar. distinguished three genders. Thus e.g. with *verbal adjectives* as attributes we find:

noun	attribute	(desinence)
	sing.	plur.
personal masc.	zero	-ūna
„ fem.	-at	-āt
impersonal (or inanimate)	zero or -at	-at

As regards the attr. in general, the practice though fluctuating, points unambiguously to a similar distribution of attributive forms. Cf. Reckendorf *Arab. Syntax* p. 58 f.:

personal masc. pl. in -ūna	: attr. (masc.) pl.
„ „ „broken“ pl. :	„ (masc.) pl., rarely fem. sing.
„ fem. pl. in -ātu <sup>n</sup> :	„ (fem.) pl., rarely fem. sing.
„ „ „broken“ pl. :	„ (fem.) pl., rarely fem. sing.
impersonal masc. pl. in -ūna	: „ fem. sing., rarely pl.
„ „ „broken“ pl. :	„ fem. sing., rarely pl.
„ fem. pl. in -ātu <sup>n</sup> :	„ fem. sing., rarely pl.
„ „ „broken“ pl. :	„ fem. sing., rarely pl.

Collective nouns govern the pl. if they are personal.

The same rules obtain for nominal sentences consisting of noun (as subject) + following adj. (as predicate), *ibid.* p. 28 f.<sup>2</sup>

<sup>1</sup> The attribute being governed by the determined noun and having different forms depending on the gender of the noun.

<sup>2</sup> In verbal sentences the predicate preceding the subject is structurally *neuter* (= masc. sing.) with the following departures from this rule: the verbal form is fem. sing. if immediately followed by a noun with „natural“ fem. gender (= denoting a person or animal). In the case of a „grammatical“ fem. or a fem. pl. the overall masc. sing. form competes with fem. sing. In the case of other plurals the fem. sing. form of the verb may be used instead of the masc. sing. The fem. sing. form is also usual if the noun is collective and non-masc. The pl. and dual forms of the 3<sup>rd</sup> p. are rather rare.

§ 2. The above rules governing the form of the attribute are important. Apparently the plurals of impersonal nouns required the fem. sing. form of the corresponding attributes<sup>3</sup>. It would be, however, premature to ascribe it to Common Sem. The rule in question has been sometimes explained by the rise, in South Sem., of „broken“ plurals, originally abstracts of allegedly fem. gender. But the corresponding verbal abstracts are masc. and the form of the attribute does not depend on the form of the pl., whether regular or „broken“. Impersonal regular plurals require the fem. sing. form of the attribute and, on the other hand, a personal „broken“ pl. entails the pl. of the determining adj. (masc. or fem.). Putting aside hesitations the old rule is still recognizable.

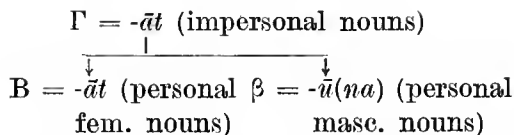
The distribution of the forms of the attributive and predicative adj. (with the fem. sing. after an impersonal noun) could, however, in spite of the above arguments be ascribed to the change *collective* > *pl.* The latter took place with *personal* nouns in the first instance. The introduction of attributes in *-ūna* and *-āt* would thus be motivated in personal plurals, whether regular or „broken“. By opposition, impersonal nouns would preserve and even extend the use of attributes in *-at*.

§ 3. Another important clew to the old distinction *personal* : *impersonal* (this time of Common Sem. origin) is the use of the regular pl. ending *-āt*. In the categories where the regular pl. (in *-ūna* or *-āt*) is preserved in Class. Ar., the ending *-āt* serves for personal fem. and for impersonal nouns. E.g. diminutives of the form *qutailu<sup>n</sup>* take the pl. ending *-āt* when stemming from impersonal nouns, e.g. *ruḡailūna* < *raḡulu<sup>n</sup>* 'man', but *kulaibātu<sup>n</sup>* < *kalbu<sup>n</sup>* 'dog'. Names of letters, months etc. also take *-āt* in the pl.

The ending *-āt* of the pl. still continues to maintain its Sem. ambiguousness (fem. and neuter) in the pl. of nominalized adjectives: *al-ḡasanātu* 'beautiful things', *at-taiḡibātu* 'good things', *al-mauḡūdātu* 'existing things', *al-maḡlūqātu* 'things created', *al-ḡāḡibātu* 'necessary things', *al-kā'inātu* 'existing things', *al-mumkinātu* 'possible things'. Similarly in Heb., where both the sing. and the pl. in *-āt* of adjectives and participles can be used in the impersonal (neuter) sense, e.g. *ḡdōlōḡ* 'res magnae', *ḡōbōḡ* 'good actions, words, things'. The same usage is current in Akk.: *kinātu* 'reality', *damḡātu* 'the good', *rūḡātu* 'remoteness'. Sometimes *-ātu* is perceived as sing. (v. Soden GAG p. 78).

§ 4. As to relative chronology *-āt* seems to be the oldest morpheme of the nominal pl. The introduction of *-ū(na)* for personal masc. nouns entailed the following distribution:

<sup>3</sup> Superficially this is comparable to the I. E. identity of pl. neuter = sing. fem.



The fem. value of  $-\bar{a}t$  is the result of polarization ( $B$  = negative,  $\Gamma$  = neuter member of the opposition). The subsequent spread of  $-\bar{u}(na)$  to impersonal nouns is due to formal factors (lack of a fem. suffix in the sing. etc.). Before this spread, however, the relation  $\beta : B$  (masc. : fem.) must have been *subordinate* to  $\Gamma : \beta$  (impersonal: pers. masc.).

Another possible opposition between the new pl. in  $-\bar{u}(na)$  and the old one in  $-\bar{a}t$  is attested in Heb. (*infra* § 18): pl. versus collective.

§ 5. As regards the creation of „broken“ plurals distinguishing the South Sem. declension from the relatively simple nominal inflection attested in Heb. or Akk., the functional conditions of their rise must be manifest in categories where it produced a semantic split. Verbal adjectives with fem. form in  $-at$  have a regular pl.: masc.  $-\bar{u}na$ , fem.  $-\bar{a}tu^n$  when referring to persons. When used as impersonal adjectives or as substantives, *either* masc. *or* fem., they have a „broken“ pl. E.g. *kātibu^n* ‘writing’: pl. *kātibūna*, fem. *kātibatun* : pl. *kātibātun*, but *kātibu^n* ‘writer, secretary’ : pl. *kuttābu^n*. The relation between verbal adj. and abstract (the source of the „broken“ pl., cf. *infra*) becomes, once the adjective (under its masc. or fem. form) is used as a *noun*<sup>4</sup>, a relation between noun and a corresponding *collective* (hence „broken“ pl.). This development corresponds to a well-known logical distinction. The abstract represents the semantic content (quality), the collective the range of objects (having the quality). The shift from *quality* (adj.) to *object* (noun) entails the shift from *content* to *range* (abstract > collective).

§ 6. The focus of the development was the (verbal) adj., its differentiation in the plural; on the one hand personal (masc. and fem.) forms of the adj., whether used as attributes or autonomously (syntactical nominalization), on the other hand substantived adjectives (semantic nominalization). The necessity of distinguishing gender also accounts for the regular pl. of the adjectives in  $-\bar{i}iun$  (nomina relativa) and of the type *‘aqtalu*, fem. *qutlā* (pl. *‘aqtalūna*, fem. *qutlajātun*). Even personal nouns distinguishing, like adjectives, between a masc. form (in zero) and a fem. form in  $-at$ , have regular plurals e.g. names of craftsmen or artisans: *ḥaijātūna* ‘tailors’, *ḥaijātātun* fem. The development left furthermore intact, besides isolated lexical items, also proper names, both masc. and fem.

As regards the replacement of the impersonal pl. of the adj. by the

<sup>4</sup> *Semantically*, i.e. referring to an external object, not *syntactically*, i.e. referring to a noun of the preceding context.

new form of the pl., cf. e.g. *aš-šadā'idu* 'difficulties, misfortunes' < *šadīdu<sup>n</sup>*, *al-bayā'itu* 'motives' < *bā'itu<sup>n</sup>*; *al-mayāni'u* 'obstacles' < *māni'u<sup>n</sup>* against the examples cited in § 3.

§ 7. With relation to the sing. the usual collectives („broken“ plurals) are, taken at face-value, *primary* derivatives, since besides affixes they are characterized by a specific ablaut of the root. But between the most common affixes and the vocalism of the root there seems to be no necessary relation, i.e. no mutual conditioning, as may be concluded from the following confrontation of the different types of „broken“ plurals:

With suffix *-at*: *qatalat*, *qitalat*, *qitālat*, *qitlat*, *qutalat*, *qutūlat*, 'aqtilat  
*-ān*: *qitlān*, *qutlān*  
*-ā'*: *qutalā'*, 'aqtilā'  
*-ā*: *qatlā*, *qatālā*

Lengthening of the vowel of  $R_2$ : *qatāl*, *qatālā*, *qatīl*, *qitāl*, *qitālat*, *qutāl*, *quttāl*, *qutūl*, *qutūlat*, 'aqtāl<sup>5</sup>.

Prefix 'a-: 'aqtāl, 'aqtilat, 'aqtilā', 'aqtul.

Cumulation of two affixes is common, cf. above *qitālat* (lengthening plus suffix *-at*), 'aqtilā' (prefix 'a- plus suffix *-ā'*), *qatālā* (lengthening plus suffix *-ā*), etc.

One is therefore entitled to decompose the forms of the above collectives („broken“ plurals) into *root-forms* characterized by a specific vocalism of  $R_2$  and  $R_1$  and affixes reinforcing their original abstract value.

§ 8. The fundamental forms may be reduced to the following types:

type *qatal*, besides the enlarged forms *qatalat*, *qatāl*, *qatl*<sup>6</sup>, *qallā*, 'aqtāl (all of them functioning also as forms of *maṣḍar*); *qatālā*;

type *qital*, besides the derivatives *qitāl*, *qitālat* (also occurring as *maṣḍars*); *qitalat*;

type *qutal* with the derivatives *qutalā'*, *qutāl* (also *maṣḍars*); *qutalat*, *quttal*, *quttāl*;

type *qutul*: derivatives *qutūl*, *qutūlat*, *qutl*<sup>6</sup>, *qutlān* (*maṣḍars*); 'aqtul

type *qatīl*: derivatives *qitl*<sup>6</sup>, *qitlat*, *qitlān* (*maṣḍars*); 'aqtilat, 'aqtilā'.

The identity of the types of the majority of „broken“ plurals with verbal abstracts (*maṣḍars*) is attributable to the *common but independent* enlargements of the fundamental types, the affixes in question serving to underline both the verbal and the nominal abstracts (i.e. *maṣḍars* and collectives). But there are forms used only as broken plurals ('aqtul, 'aqtilat, 'aqtilā', *qatālā*, *qitalat*, *qutalat*, *quttal*, *quttāl*) and vice versa (cf. the

<sup>5</sup> Gemination of  $R_2$  seems to occur only in *quttāl*.

<sup>6</sup> Notice that according to chap. II § 41 *qatl*, *qitl*, *qutl* are denominative derivatives of *qatāl*, *qatīl* (or \**qitil*), *qatūl* (or *qutul*), respectively.

*maṣḍars* with the prefix *ma-*, the types *qatalān*, *qatūl*, *qatālīyat* and others).

Taking into account the existence of the *maṣḍar* form *qatilat* the type *qatīl* may be further reduced to *qatīl* (or *qitīl*). The nuclear forms underlying the „broken“ plurals are thus identical with the oldest forms of *maṣḍars* or infinitives: *qutul*, *qitīl*, *qatal* (*fa'al*) of conjugation I (*jaqtulu*, *jaqtīlu*, *jaḡ'alu*), and *qital*, *qutal* of conj. II (*iḡtalu*, *iḡtalu*).

§ 9. On the other hand, the chief form of the verbal adjectives, representing the original sing., is the type *qātīl* (pres. participle) forming a considerable variety of „broken“ plurals:

<i>qātīl</i> : <i>qatal</i> ,	e.g. <i>tālibu<sup>n</sup></i> 'seeking' : <i>ṭalabu<sup>n</sup></i>
<i>qātīl</i> : <i>qatalat</i> ,	e.g. <i>kāmīlu<sup>n</sup></i> 'perfect' : <i>kamalatun<sup>n</sup></i> ; <i>sāḥīru<sup>n</sup></i> 'sorcerer' : <i>saḥaratun<sup>n</sup></i>
<i>qātīl</i> : <i>qatīl</i> ,	e.g. <i>nāṣīrun</i> 'helping' : <i>naṣru<sup>n</sup></i>
<i>qātīl</i> : <i>qatīlā</i> ,	e.g. <i>halīku<sup>n</sup></i> 'perishing' : <i>halkā</i>
<i>qātīl</i> : <i>aqtāl</i> ,	e.g. <i>ṭāḥīru<sup>n</sup></i> 'clean' : 'aṭḥāru <sup>n</sup>
<i>qātīl</i> : <i>qitāl</i> ,	e.g. <i>tāḡīrun<sup>n</sup></i> 'merchant' : <i>tiḡāru<sup>n</sup></i>
<i>qātīl</i> : <i>qitālāt</i> ,	e.g. <i>ṣāḥību<sup>n</sup></i> 'companion' : <i>ṣiḥābatun<sup>n</sup></i>
<i>qātīl</i> : <i>qutalā</i> ,	e.g. <i>šā'īru<sup>n</sup></i> 'poet' : <i>šu'arā'u</i>
<i>qātīl</i> : <i>qutalat</i> ,	e.g. <i>qāḍī<sup>n</sup></i> 'judge' : <i>quḍātu<sup>n</sup></i>
<i>qātīl</i> : <i>quttal</i> ,	e.g. <i>nā'imū<sup>n</sup></i> 'sleeper' : <i>nuḡḡamu<sup>n</sup></i>
<i>qātīl</i> : <i>quttāl</i> ,	e.g. <i>kātibu<sup>n</sup></i> 'writer' : <i>kuttābu<sup>n</sup></i>
<i>qātīl</i> : <i>qutul</i> ,	e.g. <i>tāḡīru<sup>n</sup></i> 'merchant' : <i>tuḡuru<sup>n</sup></i>
<i>qātīl</i> : <i>qutūl</i> ,	e.g. <i>šāḥīdu<sup>n</sup></i> 'witness' : <i>ṣuḥūdu<sup>n</sup></i>
<i>qātīl</i> : <i>qutlān</i> ,	e.g. <i>fārisu<sup>n</sup></i> 'rider' : <i>fursānu<sup>n</sup></i>
<i>qātīl</i> : <i>qatīl</i> ,	e.g. <i>ḡāzi<sup>n</sup></i> 'soldier' : <i>ḡaziīu<sup>n</sup></i>
<i>qātīl</i> : <i>qitlān</i> ,	e.g. <i>ḥā'itū<sup>n</sup></i> 'wall' : <i>ḥitānu<sup>n</sup></i>
<i>(qātīl</i> : <i>qaḡātīl)</i> ,	e.g. <i>ḥāmīlu<sup>n</sup></i> 'pregnant' : <i>ḥaḡāmīlu</i>

Next to *qātīl* it is the frequent verbal adj. or noun *qatīl* which forms a great number of pl. types:

<i>qatīl</i> : <i>qutul</i> ,	e.g. <i>nadīru<sup>n</sup></i> 'warning' : <i>nuduru<sup>n</sup></i>
<i>qatīl</i> : <i>qitāl</i> ,	e.g. <i>šarīfu<sup>n</sup></i> 'noble' : <i>širāfu<sup>n</sup></i>
<i>qatīl</i> : 'aqtāl,	e.g. <i>šarīfu<sup>n</sup></i> 'noble' : 'ašrāfu <sup>n</sup>
<i>qatīl</i> : 'aqtilat,	e.g. 'aṣīzu <sup>n</sup> 'mighty' : 'a'izzatu <sup>n</sup>
<i>qatīl</i> : <i>qitlān</i> ,	e.g. <i>ṣabīīu<sup>n</sup></i> 'boy' : <i>ṣibīānu<sup>n</sup></i>
<i>qatīl</i> : <i>qutlān</i> ,	e.g. <i>raḡīfu<sup>n</sup></i> 'cake, loaf' : <i>ruḡfānu<sup>n</sup></i>
<i>qatīl</i> : <i>qutalā'u</i> ,	e.g. <i>ḥakīmu<sup>n</sup></i> 'sage, physician' : <i>ḥukamā'u</i>
<i>qatīl</i> : 'aqtilā',	e.g. <i>ḥabību<sup>n</sup></i> 'friend' : 'aḥibbā'u
<i>qatīl</i> : <i>qatīlā</i> ,	e.g. <i>qatīlu<sup>n</sup></i> 'killed' : <i>qatīlā</i>
<i>qatīl</i> : <i>qatālā</i> ,	e.g. 'aṣīru <sup>n</sup> 'prisoner' : 'asārā

*qatīl* : *qatā'il*, e.g. 'aḡḡibatu<sup>n</sup> 'marvellous thing' : 'aḡā'ibu  
*qatīl* : *qatalat*, e.g. ḡa'ifū<sup>n</sup> 'weak' : ḡa'afatu<sup>n</sup>, cf. Eth. ṭabīb 'wise' :  
 pl. ṭababt.

In some cases there is a striking identity of the broken pl. of *qātīl* with a *maṣḍar* of the basic verb: compare ṭalibu<sup>n</sup> and iṭlibu : ṭalabu<sup>n</sup>; nāsiru<sup>n</sup> and iṇsuru : naṣru<sup>n</sup>; ṣāhibu<sup>n</sup> and iṣḡabu : ṣiḡābatu<sup>n</sup>; ṣāhidu<sup>n</sup> and iṣḡadu : ṣuḡūdu<sup>n</sup> <sup>7</sup>. In some other cases the two categories contain the same form of the root and differ only by affixes; thus the plurals *kamalatū<sup>n</sup>*, *tiḡāru<sup>n</sup>*, *ḡitānu<sup>n</sup>*, *nuduru<sup>n</sup>*, *ḡa'afatu<sup>n</sup>*, versus the *maṣḍars* *kamālu<sup>n</sup>*, *tiḡaratu<sup>n</sup>*, *ḡitatu<sup>n</sup>*, *nudūru<sup>n</sup>*, *ḡa'āfatu<sup>n</sup>*.

It is evident that *qātīl* has been the point of departure of the „broken“ plurals of verbal adjectives since being an *inflectional* form it outstripped all the other morphological types by the *range of its use*, some of the type of „broken“ plurals being reserved almost exclusively to *qātīl* : *qatīl*, *qatalat*, *qutalāt*, *qutūl*, *qatūl*.

§ 10. Fluctuations occurring in the formation both of „broken“ plurals and of *maṣḍars* must, however, necessarily have caused a lack of correspondence in the majority of cases. The tendency to keep (nominal) collectives apart from (verbal) abstracts, and vice versa, has been probably the chief motive of these hesitations. The new plurals partly represent morphological types got out of use as verbal abstracts. This is true chiefly of the forms with prefix 'a-: Ar. 'aḡḡāl, 'aḡḡul<sup>8</sup>, 'aḡḡilat, 'aḡḡilā', Eth. 'aḡḡāl, 'aḡḡūl, 'aḡḡel(t). These are old abstracts of the IV. class, representing enlargements of *qatāl*, *qutūl*, *qatīl* (+ *at*, *ā*). Other types restricted in their original use as verbal abstracts are *qutūl* (formed only from intransitive verbs of conj. Ib), *qitāl* (receding before *qatāl* cf. chap. VI § 31) and the old Sem. infinitive *qutul*. The latter is obsolete, being used in the Koran and in poetry as a stylistically or metrically marked form, *qutul* being perceived as expressive with relation to *qutl*, cf. ḡulumu<sup>n</sup> 'dream', ḡuluḡu<sup>n</sup> 'quality', ḡukuru<sup>n</sup> 'cutting', nuduru<sup>n</sup> 'warning' etc.

Now it is just these forms which represent the chief types of the broken pl. in Ar. and also in Eth. As regards frequency the plurals 'aḡḡāl, *qutūl*, *qitāl*, 'aḡḡul, *qutul* (in this order) occupy the first places in the Koran.

§ 11. The broken pl. of quadriliterals is also originally a verbal noun. Its form *qatālibu* may be explained as a copy of the verbal noun *qatāliḡ(at)* of trilateral roots (e.g. *kariḡa* 'detest' : *karāḡiḡat*). Cf.:

<sup>7</sup> Cf. also *qātīl* of verbs of state, like *jālisu<sup>n</sup>*, *qā'idu<sup>n</sup>* 'sitting', *ḡā'idu<sup>n</sup>* 'sleeping', pl. *jūlisu<sup>n</sup>*, *qū'idu<sup>n</sup>*, *ḡujūdu<sup>n</sup>* = *maṣḍar* of *jālasa*, *qā'ada*, *ḡajāda*. Barth, *Nominalbildung* p. 464.

<sup>8</sup> Quite exceptional as verbal abstract, cf. Barth, *op. cit.* p. 457 n. 1, e.g. *balaja* 'aṣuddahu 'he reached his (manly) strength', 'afnudu<sup>n</sup> 'silliness'.



*ḵatūā* (< \**fatḵaiu*) 'sentence', pl. \**fatāḵiūn* (= *fatāḵiṇ*)  
*ḍifrā* (< *ḍifrāiū*) 'mastoid', pl. \**dafāriūn*  
*ḥidriiat* 'rugged ground', pl. \**ḥadāriūn*.

On this model the pl. of quadrilaterals is formed:

*ḵauḵabuṇ* 'constellation', pl. *ḵayākibu*  
*ḍirhamuṇ* 'drachma', pl. *darāḥimu*  
*ḍifdi'uṇ* 'frog' : *ḍifādi'u* <sup>9</sup>.

§ 12. The spread of the broken plurals in South Sem., chiefly in Ar., was steered partly by formal, partly by semantic factors, by the identity of vocalization in the sing. or by semantic relationship (names of part of the body, of animals, implements and so on). To take an example (Barth *op. cit.* p.478 ff.) there was an original association between *qatīl*, verbal adj. belonging to conj. II (*qatila*, *qatula*), and the abstract *qutal* enlarged by -ā' (*qutalā*). E.g. *baḥīluṇ* (< *baḥūla*) 'avaricious' : *baḥalā'u*; *ḍa'ifūṇ* (< *ḍa'ufa*) 'weak' : *ḍu'afā'u*; *karīmuṇ* (< *karuma*) 'noble, generous' : *ḵuramā'u*... From this original nucleus the pl. *qutalā* spread in two different directions. On the one hand identity of form (*qatīl*) entailed the creation of plurals of *passive* verbal adj. (belonging to conj. Ia), like *ṭuradā'u* < *ṭarīduṇ* 'chased', *ṭulaqā'u* < *ṭaliquṇ* 'set free', *lu'anā'u* < *la'inuṇ* 'accursed', as well as of *active* verbal adj. like *sufarā'u* < *safīruṇ* 'messenger', *'umarā'u* < *'amīruṇ* 'chief' and so on. The counterpart of this structurally conditioned spread of *qutalā* is its function as the pl. of other formations serving to describe or to characterize. Thus *ṣālīḥuṇ* 'good' : *ṣulāḥā'u*; *ḵāḥīluṇ* and *ḵahūluṇ* 'ignorant' : *ḵuhalā'u*; *saḥḥuṇ* 'generous' : *sumaḥā'u*.

The double conditioning has necessarily destroyed the possibility of a one-to-one relation between the sing. and the „broken“ pl. <sup>10</sup> This reminds us of the problem of grammatical gender, resulting in many languages from an interaction of structure (inflectional and derivational suffixes) and content (sex, synonymy), with generalizations due to structure or

<sup>9</sup> A long vowel between the 3<sup>rd</sup> and the 4<sup>th</sup> radical of the sing. is matched by *ī* in the pl.: *darrāḵuṇ* 'scandal-monger', pl. *darārīḵu*; *finḵānuṇ* 'cup', pl. *fa-nāḵīnu*; *sikkīnuṇ* 'knife', pl. *sakākīnu*.

Instead or besides -iR<sub>4</sub> the form -iR<sub>4</sub>atuṇ is also attested: *tilmīduṇ* 'disciple', pl. *talāmīdu* and *talāmīdatuṇ*.

<sup>10</sup> Thus a number of names of animals of the form *qutāl* have the pl. *'aqtilat* or *qitlān*, e.g. *ḡurābuṇ* 'raven' : *'aḡribatuṇ* or *ḡirbānuṇ*. A secondary layer adopting this pl. is represented by names of a different form: *qatīl*, *qatal*, *qatalān*, *qutal*, *qatāl*, etc. On the other hand there is the pl. *'aqtul*, originally belonging to *qatl*, which has also been extended to names of animals of other types. The 'broken' pl. is thus neither from the structural nor from the semantic standpoint predictable.

meaning. But in the case of „broken“ plurals we have to do with dozens, not two or three classes. The four or five privileged types of Class. Ar. (§ 10) may be, however, regarded as a trend towards simplification.

§ 13. There is a type of pl. with ablaut which is of Common Sem. origin: *qatl/qatal*, *qill/qital*, *quṭl/quṭal*. It is more or less directly attested in Ar. Eth. Heb. Aram. and probably Ugar.

Ar. *qit'atu<sup>n</sup>* 'piece' : pl. *qita'u<sup>n</sup>*; *'ummātu<sup>n</sup>* 'people' : *'umamu<sup>n</sup>*; *ḥalqatu<sup>n</sup>* 'ring' : *ḥalaqu<sup>n</sup>*; *ḥumratu<sup>n</sup>* 'rouge' : pl. *ḥumaru<sup>n</sup>*; *kubrā*, fem. of the elative : pl. *kubaru<sup>n</sup>*; Eth. sing. *qetl* : pl. *qetal* (chiefly for nouns of fem. gender), e.g. 'ezn 'ear' : 'ezan; *ṣefr* 'nail' : *ṣefar*; *ḥegg* 'law' : *ḥegag*; but also 'ah 'brother' : 'aḥau etc. (Brockelmann GVG I p. 429 f.). Heb. *lēb* 'heart' : *lēbāb*.

This old form of pl. is often provided with the usual desinences -āt, -ūna, -īm and so on: Ar. 'ardu<sup>n</sup> 'earth' : 'araḏ-ūna; *sidratu<sup>n</sup>* 'lotus' : *sidar-ātu<sup>n</sup>*. Eth. *ḥelqat* 'ring' : *ḥelaqāt* (cf. Ar. *ḥalaqu<sup>n</sup>*); *kalb* 'dog' : *kalabāt* and so forth.

In Heb. the regular plurals of *qatl* (nomina segolata), *qallat* are \**qatalīm*, \**qatalāt*, thus *kēlēb* 'dog' : *klābīm*; *malkā* 'queen' : *mlāchōp*; 'iš (\*'inš), pl. 'anāšīm.

In Ugar. we find sing. *riš* 'head' : pl. *rašm* explained by Gordon *Manual* p. 44 as standing for *ra'su* : *ra'aš-ūma*; *rbt*, 'ten thousand' : pl. *rbbt* to be read *ribbatu* : *ribabātu*.

§ 14. The principal clue to the understanding of this formation is the predominantly fem. gender of the respective nouns in Ar. (-at) and Eth. The relation sing. : pl., with the sing. form characterized (-at) as against the zero of the pl., is the inversion of an older relation *collective* : *singulative*<sup>11</sup> (*nomen unitatis*), originally occurring in generic nouns and in mass nouns. E.g. Ar. *ḥamāmu<sup>n</sup>* 'dove' (as species) : *ḥamāmatu<sup>n</sup>* (as individual); *šaḡaru<sup>n</sup>* 'trees' : *šaḡratu<sup>n</sup>* 'tree'; *dahabu<sup>n</sup>* 'gold' : *dahabatu<sup>n</sup>* 'piece of gold'; *tibnu<sup>n</sup>* 'straw' : *tibnatu<sup>n</sup>* 'a straw'. Heb. 'onī 'fleet, ships' : 'oniā 'ship'; *šiš* 'blossom' (coll.) : *šišā* 'flower'. But the older form of this relation is \**qatal* : \**qatlat*, still attested in pairs like \**ḥamisū* : \**ḥamsatu*, \**maliku* : \**malkatu*, Ar. 'ašara : 'ašrata (chap. VII § 13). The inversion of *qatal* : *qatlat* to *qatlat* (*nomen unitatis*) : *qatal* (collective, hence pl.) accounts for the extension of the procedure to *qatl* : *qatal*, since the transformation *qatlat* → *qatal* was necessarily analysed as *qatlat* → *qatl* → *qatal* and implied *qatl* → *qatal*. Hence the possibility of forming plurals like Ar. ('ardu<sup>n</sup> →) 'araḏ-ūna, Heb. (\**kalb* →) \**kalab-īm*.

Another, though less convincing, explanation of the plurals *qatal*, *qital*,

<sup>11</sup> Notice an analogical development in the Britannic group of Celtic.

*qatal* would be to consider them as old adjectives from *qatl*, *qitl*, *qull* (cf. chap. II 43).

§ 15. The close connection between gender and number is best exemplified by the fate of the „fem.“ suffixes *-at* and *-āt*. Since the normal source of the renewal of the pl. are collective forms going back to abstract nouns (for a possible explanation of pl. *-ū*, *-ī* cf. chap. II § 16), the long vowel of *-āt* is in agreement with the function of the lengthened grade as discussed in chap. II § 20, 22. But *-āt* itself is already a *derivative* suffix forming abstracts from adjectives. This is suggested by the analogous development of I.E. *-ā-*, cf. *The Infl. Cat. of I.E.* p. 211 ff. Once the relation *adj.* : *abstract* shifts to *noun* : *abstract* (i.e. once the *adj.* is used as a noun), we obtain the following functions of *-at*:

- a) noun: collective (applicable to all nouns);
  - b) noun: feminine (with personal or animate nouns)'
  - c) noun: singulative (nomen unitatis; with generic and mass nouns);
  - d) diminutives (in Akk. cf. *GAG* p. 74); deterioratives (*GVG* I p. 320 f.).
- The values b) and c) are well attested.

§ 16. Concerning a) notice the use of the fem. form in *-at* as the pl. of adjectives determining impersonal nouns in Ar. (§ 1). This fact strongly reminds one of the I.E. identity between the fem. sing. and the neuter pl. of the *adj.* An instructive parallel of the development *abstract* > *pl. of adj.*, comparable to the fate of *-at*, is the Akk. replacement of the masc. pl. ending *-ū* by the abstract suffix *-ūtu*. Originally limited to adjectives referring to impers. or inanimate nouns the ending *-ūtu* was then generalized in the masc. whereas the fem. plural maintained its old desinence *-ātu*. The inherited ending *-ū* of the masc. is attested in adjectives used as nouns.

§ 17. With the *noun* the postulated abstract and collective in *-at* was reinforced already in Common Sem. (cf. chap. II § 22) by the lengthening of the suffixal vowel (*-āt* = *-at* + lengthening), thus differentiating the function a) (collective and pl.) from function b) (feminine).

The pl. in *-āt* was by its origin a collective independent of gender, afterwards a regular pl. But the rise of the new pl. in *-ūna* (*-ūma*), i.e. the partial ousting of *-āt* by *-ūna* could easily change the semantic relation between *-ūna* (*-ūma*) and *-āt* into one between pl. and collective<sup>12</sup>.

§ 18. Whereas in the Heb. *adj.* (the real exponent of gender) the distribution tended to be *\*-ūm* (*\*-ūma*) for masc., *-āt* for fem.<sup>13</sup> and *-āt* when used as an impersonal collective noun, the Heb. *noun* shows traces

<sup>12</sup> Cf. Italian *muri* and *mura* from *muro*, *uovi* and *uova* from *uovo* and a number of other instances.

<sup>13</sup> An essential difference between Heb. and Ar. (cf. § 1).

of *-āt* for masculines and *-īm* for feminines e.g. *'ābōp* 'fathers', *pīlaḡšīm* 'concubines'; *lūqḥ* 'tablet': *lūḥōp*; *ḏbōrā* 'wasp': *ḏbōrim*; etc.<sup>14</sup>

But *in general* the trend of the distribution in Heb. is the association of zero in the sing. with *-īm* in the pl., of sing. *-at* with pl. *-āt*. The gradual replacement of *-āt* by *-īm* in nouns with ending zero in the sing. is evidenced by certain hesitations between *-īm* and *-āt* conditioned partly by stylistic, partly by semantic factors. Thus e.g. *īāmīm* 'days', *šānīm* 'years' are stylistically neuter (primary function), *īāmōp*, *šānōp* (constr. st. *īmōp*, *šnōp*) poetic (secondary function). Names of the parts of the body, generally used in the dual, have a pl. in *-ōp* if used in a figurative sense (secondary function): *īādōp* 'parts, shares', cf. *īād* 'hand'; *kappōp* 'pans, vessels' cf. *kaf* 'hollow of the hand'; *'āianōp* 'springs' cf. *'āin* 'eye'. Moreover, in many examples quoted in Gesenius HG, 1909, p. 253 f., the collective value of the pl. in *-ōp* is evident, as in *p'āmōp* 'pedestals' (of the ark of covenant), *qrānōp* 'horns at the corners of the altar'; *'arāiōp* 'artificial lions flanking Solomon's throne' (pl. *'arāīm* 'lions' for animals)<sup>15</sup>.

§ 19. The old abstract value of *-at* is also borne out by the inflection of the personal pronoun, chiefly in Akk. In order to form the oblique cases of the personal pronoun (represented generally in other Sem. languages by pronominal suffixes) *-at-* is attached to the personal suffixes and the resulting stem is inflected, *-i* serving both for the gen. and the acc.<sup>16</sup>

§ 20. Therefore the respective stems are identical with the fem. form of the possessive pronoun. Cf. the original abstract value of Engl. *my*, *your* etc. + *self*. In Lat. the gen. of the personal pronouns *mei*, *tui* etc. is a gen. of the *neuter abstract* of the poss. pronoun: *meum*, *tuum*...

Possessive suffix			Derivative in <i>-at-</i> (gen.-acc. <i>-i</i> )
sing.	1 <sup>st</sup> p.	<i>-ja</i>	<i>-jāti</i>
"	2 <sup>nd</sup> p. masc.	<i>-ka</i>	<i>-kāti</i>
"	2 <sup>nd</sup> p. fem.	<i>-ki</i>	<i>-kāti</i>
"	3 <sup>rd</sup> p. masc.	<i>-šu</i>	<i>-šuāti &gt; -šāti</i>
"	3 <sup>rd</sup> p. fem.	<i>-ši</i>	<i>-šiāti &gt; -šāti</i>
pl.	1 <sup>st</sup> p.	<i>-ni</i>	<i>-niāti</i>
"	2 <sup>nd</sup> p. masc.	<i>-kunu</i>	<i>-kunāti</i>
"	2 <sup>nd</sup> p. fem.	<i>-kina</i>	<i>-kināti</i>
"	3 <sup>rd</sup> p. masc.	<i>-šunu</i>	<i>-šunāti</i>
"	3 <sup>rd</sup> p. fem.	<i>-šina</i>	<i>-šināti</i>

Ugar. has *hwt*, *hyt*, *hmt* (= *huyati*, *hiyati*, *humati*).

<sup>14</sup> From Ar. cf. e.g. *samā'u* 'sky': *samāuāti*; hesitation for *'arḏu* 'earth': *'ar(a)ḏūna* and *'ar(a)ḏātu*.

<sup>15</sup> Hesitation *'alummīm* and *'alummōp* 'sheaves'.

<sup>16</sup> In accordance with the original diptotic inflection of abstracts.

§ 21. Besides the gen.-acc. in *-ti* there exists a special dative desinence, limited to Bab. It may be explained as an offshoot of *-ti*. In Ass. the forms in *-ti* are used also as datives if preceding the suffixed acc. This double function depending on the position of the pronominal suffix is a Sem. heritage, cf. Ar. 'a'taitu + ka + hu 'I gave it to thee' (*-ka* reinterpreted as dat.). Now the contraction of the syncopated dative forms *-niât-*, *-kunât-*, *-kinât-*, *-šunât-*, *-šinât-* with the accusatives *-šu*, *-ši*, *-šunu*, *-šina*<sup>17</sup> produced forms with *-ss-* (*-niâss-*, *-kunâss-*, *-kinâss-*, *-šunâss-*, *-šinâss-*) which could be also interpreted as the result of *-š + š-* (from *-š-*)<sup>18</sup>. Since the dative function of these forms is determined by their position (secondary syntactical function, the function as acc. being primary), the secondary phonemic value of *-ss-*, viz. the value *-š + š-*, is assigned to the secondary syntactical function<sup>19</sup>, hence the autonomous datives *niâši*, *kunâši*, *kinâši*, *šunâši*, *šinâši*, etc.; also reinforced by the dative *-m* of the pronominal suffixes (*-ni-m*, *-ku-m*, *-ki-m*, *-šu-m*, *-ši-m*)<sup>20</sup>, hence *-niâšim*, *-kunâšim*, *-kinâšim*, *-šunâšim*, *-šinâši(m)*. This seems to be the origin of the opposition dat. *-ši(m)* : acc. *-ti*.

Finally, the functional equivalence of the possessive suffixes with the ending of the possessive gen. could explain the desinence *-i-š* of the Akk. „dative“. But according to Gelb *Sequ. Reconstruction of Proto-Akk.* p. 92 sq. *-i-š* must be rather considered as a *postposition*, attested as *preposition* in O. Akk.

<sup>17</sup> In the syntactical slot of *direct object* the numerical preponderance of the 3<sup>rd</sup> p. stands to reason.

<sup>18</sup> *-ss-* is a *point of neutralization* of the opposition *-t + š-* : *-š + š-*.

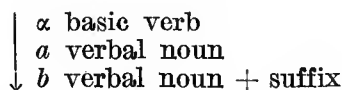
<sup>19</sup> Cf. the law of morphological differentiation formulated in chap. II § 20.

<sup>20</sup> The desinence *-(u)m* assigning — just like Engl. *to* — a final meaning to the infinitive, is probably of the same origin.

## Chapter IX. DENOMINATIVE DERIVATIVES

§ 1. Nominal suffixes like *-i-i-*, *-at-*, *-ā'-*, *-ā* scarcely give rise to special observations. About *-at* cf. chap. VI § 64—68, chap. VIII § 13 ff. Like in the E. I. languages many suffixes are attached to nominal stems (roots) and have well-defined semantic functions. Thus the suffix *-ān-* serving chiefly for deverbative abstracts, hence also deverbative nouns, is used to derive adjectives from primary nouns e.g. Ar. *qarnānu<sup>n</sup>* 'horned' < *qarnu<sup>n</sup>* 'horn'. Such adjectives are the source of diminutive nouns in *-ān-* as in Ar. *'aqrabānu<sup>n</sup>* 'earwig' < *'aqrabu<sup>n</sup>* 'scorpion', *fur'ulānu<sup>n</sup>* = *fur'ulu<sup>n</sup>* 'young (male) hyena', Heb. *'išōn* 'little man > pupil of the eye', *śaharō-nīm* 'little moons (a kind of necklace)'.

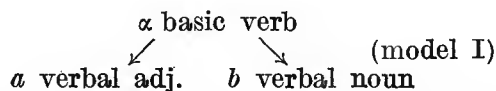
The example of certain verbal nouns proves, however, that such suffixation can be reinforced by a concomitant feature, the ablaut of the root-vowel. *Historically* such phenomena must be analysed as *secondary* associations:



The relation  $\alpha : b$  is equal to the sum  $\alpha : a$  (ablaut) +  $a : b$  (suffixation). Apophony + suffixation is therefore frequent in the case of verbal nouns (Ar. *maṣḍars*).

Here belong also the relations *qatal* : *qatl*, *qatil* : *qitl*, *qatul* : *qutl* (the rootform  $R_1 a^* R_2 R_3$  being a secondary derivative from verbal adjectives, chap. II § 41).

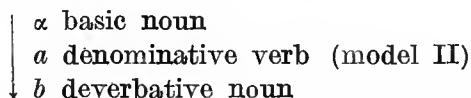
§ 2. The model underlying the formation of internal („broken“) plurals was different:



We have seen that the internal plurals are the result of a *secondary* association between *a* as basic form and *b* as derived form; *b* itself may contain a suffix or represent the naked root.

Internal plurals, originally collectives, are *denominative* derivatives, though their original range was necessarily restricted by the fact that the respective singulars were all *deverbative* adjectives (> substantives). We shall see that there are also other denominative categories which owe their origin to such *secondary* oppositions of two deverbative derivatives. Their characteristic feature, as against those formed by means of simple suffixation, is the ablaut of the root-vowel(s).

Another group of denominative formations with apophony owes its rise to the existence of denominative verbs:



The secondary association  $\alpha : b$  originates derivatives based on genuine, non-motivated nouns (also adjectives or numerals) and at the same time contributes to the spread of apophony in denominative word-formations.

We thus obtain two groups of denominative derivatives with apophony of the radical vocalism:

- 1) originating in a relation between two deverbative nouns (model I);
- 2) originating in a relation between a non-motivated noun and a deverbative one (model II).

§ 3. Examples. Collectives (> „broken“ plurals) have already been treated. The formation of abstracts from verbal adjectives, viz. the types *qaʔtaʔl* : *qaʔtāʔl* and *qataʔl* : *qaʔtl* has been discussed chap. VI, § 11; §§ 13—14, 28.

One of the most important formations of 1) is the verbal adj. of the type *qutal*, reinforced to *qutāl* and *quttal*. Now the verbal form *juḡtalu* (Ar. „perf.“ *qutīla*), besides serving as passive, can also denote an abnormal state (or a malady), chap. VI § 35.<sup>1</sup> Depending on the opposing terms the formation may develop different meanings, chiefly diminutive or augmentative with corresponding hypocoristic or pejorative shades. Cf. Ar. (*ṣaḡīruʔ* : *ṣuḡāruʔ* etc. (*ibid.*)) where *qutāl* has an augmentative value<sup>2</sup>. Having become productive they are formed, just like the Ar. „broken“ plurals, also from primary nouns (model I). Cf. Akk. *azlu* ‘kind of gazelle’ : *uzālu* ‘young gazelle’; *baqqu* ‘gnat, midge’ : *buqāqu* (diminutive), Ar. *baqquʔ* : *buqaiquʔ*; Akk. *puḥādu* ‘lamb’.

<sup>1</sup> The starting-point of this opposition has to be looked for in instances like *hazula* ‘to be meagre’ : *huzila* ‘to be emaciated, worn-out’, the corresponding verbal adjectives being *hazīl* and *huzāl*.

<sup>2</sup> Akk. *kusīpu* ‘morsel of bread’ besides *kusāpu*, *ṣehru* ‘little’ besides *ṣuhāru*, *daqqu* ‘small’ : *duqāqu* (diminutive); *kabru* ‘big, thick’ : *kubāru* (augmentative), *qardu* ‘strong’ : *qurādu* ‘hero’.

Ar. *qutailu<sup>n</sup>*, e.g. *kulaibu<sup>n</sup>* 'little dog', is a morphological variant of *qutall*. Gemination of  $R_3$  expressing diminutive and deteriorative shades of meaning is confirmed by the types *qatlūl*, *qutlūl* attested in Ar. and in other Sem. languages, cf. *GVG* I, p. 366 f.

In nouns with  $R_3 = i$  *qutallu<sup>n</sup>* became *qutaiju<sup>n</sup>* which could be interpreted as  $R_1uR_2aiR_3u$  (= form with diphthong *ai* plus simple  $R_3$ ), e.g. Ar. *fatān* (\**fataju<sup>n</sup>*) 'young man' : dim. *futaiju<sup>n</sup>*; *qādi<sup>n</sup>* (\**qādiju<sup>n</sup>*): 'judge' : *qudaiju<sup>n</sup>*. The spread of *qutail* to strong roots is a characteristic feature of Ar.

Theoretically a similar phenomenon could occur in roots with  $R_3 = u$ . Now there are traces of a diminutive type *qittaul*, cf. Ar. '*iḡḡaulu<sup>n</sup>* 'little calf' < '*iḡlu<sup>n</sup>*, and without corresponding basic forms *ḡinnauṣu<sup>n</sup>* 'sucking-pig' and *sinnauru<sup>n</sup>* 'cat' (from Aram.). The vowel *i* of the first syllable would have to be explained by dissimilation:  $u - au > i - au$ .

In the same way the gemination of  $R_2$  *qattalu* = *qaiḡalu*, *qayḡalu* in roots with  $R_2 = i, u$  has engendered the types *qaitāl*, *qautāl*. They do not, however, seem to be of any morphological importance. Still we find e.g. Ar. *haidār* = *haddār* 'babblers', *haiḡār* = *haṣṣār* 'crushing (lion)'. The forms with diphthong have an expressive shade of meaning.

Incidentally there is still another possibility of interpretation of geminated  $R_2$ , viz.  $TT = T +$ . Since in some Ar. dialects  $T + > TT$  (cf. also the type *ittaḡada* VIII < '*aḡada*), an etymological geminate  $TT$  may be interpreted as  $T +$ , e.g. *ṭamnu<sup>n</sup>* 'quiet' > *ṭammāna* 'calm down' > *ṭam'ana* (hence with metathesis *ṭa'mana*) 'lean back to relax'. However, the latter possibility does not seem to have been exploited in denominative derivation.

In the case of *qaitāl* etc. weak roots of the type  $q-i-l$  and  $q-u-l$  formed the structurally ambiguous *voces mediae* making possible a differentiation between *qattāl* and *qaitāl*.

§ 4. Group 2) of § 2 is represented e.g. by ordinal numbers. In all Sem. languages their derivation has been *indirect*, effected through the medium of a denominative verb built on the cardinal number.

According to a well-known and accepted theory an ordinal number like  $x^{th}$  served in the first instance to denote a person or an object completing the given number to  $x$  (= „being the last of a series of  $x$  persons or objects“). Cf. the denominative Ar. verbs meaning 'to make up (to 3, 4, 5, 6, 7...)' : *ṭaltitu*, *ṭarbi'u*, *ṭahmisu*, *ṭasdisu*, *ṭasbi'u*... with their participles serving as ordinal numbers: *ṭālitu<sup>n</sup>*, *rābi'u<sup>n</sup>*, *ḡāmisu<sup>n</sup>*, *sādisu<sup>n</sup>*, *sābi'u<sup>n</sup>*, and so on. Similarly in Ass.: *ṣānium* '2nd', *ṣālīsum* '3rd', *ṣādīsum* '6th' <sup>3</sup>. Finally, the form *qātīl* of ordinal numbers is also attested in Ugar.

<sup>3</sup> In M. Ass. a new type (*qatāliju*) comes up, thus *ṣanā'i(j)u* '2nd', *ṣalāšiu* '3rd', *rabā'i(j)u* '4th', *\*samāniu* '8th', cf. *GAG* p. 63. The older type survives in *ṣāniu* 'other'.



Besides *qātil* the participles of conj. II, *qatīl* and *qatul*, were also used for ordinal numbers. The former is represented in Heb., cf. *šeni*, *šlīši*, *rībī'i*, *ḥamīši* and so on (*qatīl* with lengthening plus addition of the adj. suffix *-īi-*). In Ar. the noun *qatīl*, corresponding to the adj. *qatīl*, is used to denote fractions, e.g. *talītu*<sup>n</sup> '1/3', *ḥamīsu*<sup>n</sup> '1/5', *sadīsu*<sup>n</sup> '1/6'<sup>4</sup>. Another noun built on *qatīl* is *qitlu*<sup>n</sup> with the specific meaning 'something happening every *x*<sup>th</sup> day': *rib'u*<sup>n</sup> 'watering (of camels) on the fourth day' or 'quartan fever'; *ḥimsu*<sup>n</sup> 'watering on the fifth day', and so on.

Although the type *qātil* is attested in all three major branches of Sem. (Akk. Ugar. Ar.), there is a strong supposition in favour of the part. *qatul* being the oldest form of the numeral. It is the usual form of ordinal numbers in Bab. In Heb. we find *ʾāšōr* (\**ʾasuru*) 'tenth day of the month'. Most significant, however, seems the fact that in all Sem. languages the names of fractions, '1/3', '1/6', etc., have the form *qutl*, representing a substantive derived from the ordinal number *qatul*: Bab. *šulšum* '1/3', *šuš-šum* '1/6', Heb. *roḇa'* '1/4', *ḥomeš* '1/5', Ar. *tultu*<sup>n</sup>, *rub'u*<sup>n</sup>, *ḥumsu*<sup>n</sup>, *sudsu*<sup>n</sup>...<sup>5</sup>. At any rate *qutl* referring to ordinal numbers is *denominative* whereas *qitl* (Ar. *rib'u*<sup>n</sup>, *ḥimsu*<sup>n</sup> etc.) is indirectly a derivative of the *verb*. This distribution is in agreement with the remarks of chap. VI § 9.

The important point to keep in mind is the following: it is the constant recourse to a real or virtual verbal model which conditions the renewal of the structure of ordinal numbers. Thus in spite of all rearrangements and differences between the individual languages the fundamental pattern remains the same. We have seen that the particular models are different (*qatul*, *qatīl*, *qātil*)<sup>6</sup>, but all are of verbal origin. In Ugar. fractional numerals have the form of verbal abstracts with *m-* prefix: *mḥlḥt* '1/3', *mrb't* '1/4', *mḥmšt* '1/5', etc.<sup>7</sup>

§ 5. An example apparently illustrating model II (§ 2), but probably belonging to model I (cf. § 3) is *qatīl*, *qatūl* in Ar. *ša'ru*<sup>n</sup>, *ša'aru*<sup>n</sup> 'hair': *ša'iru*<sup>n</sup> 'barley' ('hairy, hirsute'); Heb. *ša'arā* 'hair': *ša'ir* 'hairy, he-goat', whereas *š'orā* 'barley' represents another type of deverbative adj. (*qatulat*). Cf. Ar. *ša'iru*<sup>n</sup>: Heb. *š'orā* like Ar. *ḡatimu*<sup>n</sup> 'orphan': Heb. *ḡāḇom*.

<sup>4</sup> Cf. the Engl. parallel: *one third*, *one sixth* = nouns stemming from the numeral adjectives *third*, *fourth*, *sixth* etc.

<sup>5</sup> Heb. fractional numbers like *ḥamīšip* '1/5', *ʾasīrip* '1/10' have been rebuilt on the model of corresponding ordinal numbers.

<sup>6</sup> This order may well represent a chronological sequence, cf. the gradual replacement of conj. II by conj. I, and within conj. II, the early decline of *qatula*.

<sup>7</sup> Probably with vocalisation *i* (*māḥlīptu*, *marbītu*, *māḥmīštu*) judging by Heb. *ma'asēr* 'one tenth; tithe'.

A difference like that between Akk. *šēlu* 'rib' (< \**šal'u*) and West Sem. \**šila'u* (Ar. *šila'u*<sup>n</sup>, Heb. *šēlā'*) may be also attributed to model I.

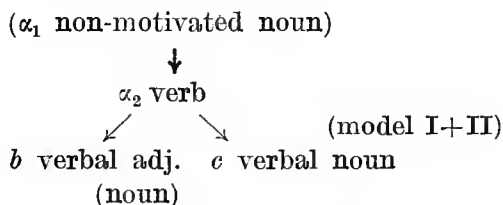
Denominative derivatives presupposing model II follow the pattern of agent nouns of the form *qātil* or *qattāl*:

- Heb. *ša'ar* 'gate' : *šō'er* 'porter'  
 „ *kereṃ* 'vineyard' : *koreṃ* 'vine-dresser'  
 „ *bāqār* 'cattle' : *bōqer* 'herdsman'  
 „ *qešēp* 'bow' : *qaššāp* 'bowman'  
 Ar. *taisū*<sup>n</sup> 'he-goat' : *taījāsū*<sup>n</sup> 'breeder of billy-goats'  
 „ *kalbu*<sup>n</sup> 'dog' : *kallābu*<sup>n</sup> 'breeder of dogs'

Cf. also denominative abstracts like Heb. *zāchār* 'male' : *zchūr* 'persons of male sex' (collective); *šēbā* 'seven' : *šābūq* 'week' (collective). If *ēbēd* 'slave' is deverbative, then *ēbēd* : *ʿabuddā* (coll.) must be explained by model I.

Denominative *nomina loci* like *ma'sadatu*<sup>n</sup>, *mad'abatū*<sup>n</sup> 'region where lions, wolves may be met' also presuppose denominative verbs; cf. *'asida* (< *'asadu*<sup>n</sup>), *da'iba* (< *dī'bu*<sup>n</sup>) 'to be afraid of lions, wolves'.

Notice, in general, that in many a case the postulated verb of model II is lacking. This means that it is not always possible to draw a sharp line between cases belonging to model II and those of model I. Only the overall pattern is always valid:



Denominative derivatives with apophony follow the pattern of either *b : c* or  $\alpha_1 : c$ .

§ 6. One of the striking features of Sem. are such categories as adjectives denoting colours or physical defects. In the I.E. languages such adjectives, lacking a common exponent, do not represent morphological categories although from the lexical point of view they form semantic groups. In Sem. they look like *deverbative* derivatives.

Adjectives denoting colours:

Akk. *qatul*, e.g. (*w*)*arqu*, *aruq* 'yellow, green'; *šuru* (\**šauru*) 'black, dark'; cf. *warāqu* 'be yellow, green'.

Heb. *qatul*, e.g. *'ādōm* 'red' (*'ādmū* 'they were red'); *bārōd* 'speckled'; *iārōq* 'green'; *nāqōd* 'speckled'; *šāhōb* 'gleaming red'; *šāhōr* 'yellowish-red'; *šārōq* 'bright red'; *šāhōr* 'black' (*šāhar* 'has become black'). The forms

*iārāq* 'green', *lāḥān* 'white' continue \**qatal* borrowed from conj. Ia (chap. VI, § 26).

Ar. *'aqtal* : *'abiādu* 'white', *'aḥmaru* 'red', *'aḥḍaru* 'green', *'azraqu* 'blue', *'asmaru* 'brown', *'asṣadu* 'black', *'aṣfaru* 'yellow', etc.

Aram. *quttāl*, e.g. *'ukkām* 'black', *iurrāq* 'green'.

Similarly for adjectives denoting physical defects:

Akk. *qattul* (Ass.; *quttul* in Bab.): *sukkuk* 'deaf'; *tummu* 'deaf'; *kusṣud* 'crippled'; *kubbur* 'corpulent'.

Heb. *qittil* (< \**qattil*) : *'ittēr* 'left-handed'; *'illeṃ* 'speech-less'; *gibbeqāḥ* 'bald on the forehead'; *gibben* 'hunched'; *ḥereš* 'deaf'; *piṣṣeqāḥ* 'lame'; *'iyyer* 'blind'; *'iqqeš* 'crooked'; *qereqāḥ* 'bald'.

Ar. *'aqtal* (reinforcement of *qatal*): cf. (as against Akk. and Heb. forms) *'asakku* 'deaf', *'aḥrasu* 'speechless', *'a'yaru* 'one-eyed', *'agra'u* 'bald, bare', *'abkamu* 'speechless', *'aḥḍabu* 'hunchbacked', *'aṣammu* 'deaf', *'atrašu* 'deaf', *'a'raḥu* 'lame', *'a'mā* 'blind', *'aksahu* 'lame', and so on.

Whereas the types *qatul* (Akk. and Heb.), *qattul* (Akk.) and \**qattil* (Heb.) are understandable as the participles *qatul*, *qatil* and their reinforcements (*qattul*, *qattil*), Ar. *'aqtal* is simply the elative form<sup>8</sup> which has forced out of the cadre the old terms for colours and physical defects. The Ar. form *qatlā'u* is restricted in the historical period to the fem. gender. Being originally an abstract *qatlā'u* itself also represents a reinforcement of the original adj., cf. the frequent replacement of *qatil*, *qatul* by *qatil*, *qatūl*, or above *qattil*, *qattul* for *qatil*, *qatul*.

§ 7. The significant feature of these derivatives is the disappearance of the old basic forms making them lose the character of expressive reinforcements. Ar. proves that all the above procedures are to be attributed to the Sem. tendency of denoting colours and physical defects by *intensive deverbative* formations. Special verbal classes, IX and XI, the former intensive, the latter doubly intensive, are reserved in Ar. to express these qualities<sup>9</sup>. The above classes function *besides* or *instead* of *qatila/qatula*. The *permanence* of the qualities expressed accounts for the intensive formation (gemination).

But whereas in *qattul*, *qattil*, *'aqtal* expressivity has found a formal exponent (gemination, use of abstract noun for adj.), *qatul* for colours in Akk. and Heb. may possibly be explained by the opposition *qatil* (transient state) : *qatul* (permanent state) with apophony *a i > u* serving as a means of underlining a permanent quality. The Akk. gemination in *qattul* (*quttul*) is originally proper to verbal adjectives originating in an

<sup>8</sup> An old abstract used as apposition or predicative noun. Abstract meaning preserved in isolated cases like *'aulaḡu* 'lunacy'.

<sup>9</sup> Gemination of R<sub>3</sub> in Ar. verbs of class IX: *iqṭalla*; gemination and lengthening of the vowel of R<sub>2</sub> in *iqṭālla* (class. XI).

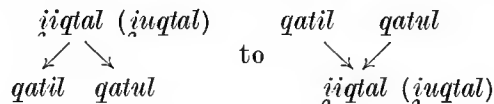
opposition between the adj. of class I<sub>1</sub> and that of Akk. class II<sub>1</sub> or III<sub>1</sub>. Verbal adj. of class II<sub>1</sub>: *nasqu* 'chosen' (< *nasâqu* 'choose'): *nussuqu* 'exquisite'; *rabû* 'big, great' (< *rabû* 'be or become big; grow'): *rubbû* (intensive); *šeburu* 'broken' (< *šebêru* 'break'): *šubburu* (intensive). Verbal adj. of class III<sub>1</sub>: (*w*)*atru* 'abundant' (< *watâru* 'be abundant, redundant'): *šûturu* 'enormous'.

As regards the vowel *i* of the first syllable of Heb. *qittil*, the original timbre seems to have been *a*, cf. the abstracts *gabbahāp* 'baldness of the forehead', *ʿaqqerep* 'blindness', *qārahāp* 'bald spot of the head'.

The intensive character of the Sem. adjectives denoting colours is furthermore confirmed by Aram. (*quttāl*, a further reinforcement of *qutāl* (chap. VI, § 38)<sup>10</sup> and by reduplicated forms like Heb. *ʿadamdām* 'red-dish', *ʾiraqrāq* 'greenish' (< *ʾāḏom*, *ʾiārōq*). In Eth. we find a similar form (*qatatil*).

§ 8. Among the derivatives formed from nouns the denominative verbs must be mentioned. All non-basic classes of the verb were originally denominative. They must be explained by the chain 1. *basic verb* → 2. *deverbative adj.* (or *noun*) → 3. *denominative verb*. The secondary relation 1. → 3. changed the status of 3. to that of a *deverbative verb*. Some of the derived classes continue, however, to function also as denominative, e.g. *qattala*, *taqattala*, *ʾaqtala* in Ar., or *piʿel*, *hiṣṣaʿel*, *hiʿil* in Heb.

The important point is that the basic class also contains denominative verbs. Let us symbolize the basic opposition between a noun (adjective) and the derived verb by a diagram consisting in an inversion of the relation



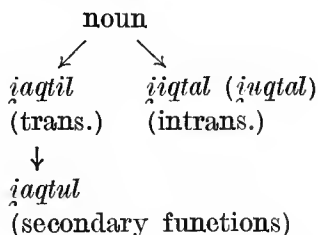
Now *qatil* : *ḡiqtal* and *qatul* : *ḡuqtal* imply the possibility of the derivation *qitil* : *ḡiqtal*; *qital* : *ḡiqtal*; *qitul* : *ḡuqtal*; *qutal* : *ḡuqtal*; *qatal* : *ḡiqtal* and *ḡuqtal*; indirectly also the possibility of the derivation *qitl*, *qutl*, *qatl* : *ḡiqtal* (*ḡuqtal*), since *qitl*, *qutl*, *qatl* are themselves derivatives of *qatil*, *qatul*, *qatal*, respectively. This means that whatever the vocalization of the basic noun (*qatil*, *qitil*, *qital*, *qatul*, *qutul*, *qutal*; *qitl*, *qutl*, *qatl*), the derivation of a denominative verb of the form *ḡiqtal* (*ḡuqtal*) is possible.

The corresponding trans. forms of the denominative verbs would be either *ḡaqtil* or *ḡaqtul*.

§ 9. Whereas the semantic difference between *ḡiqtal* and *ḡuqtal* is already known (chap. IV, § 14), the choice between *ḡaqtil* and *ḡaqtul* as denominative verb is not clear. Theoretically, on the intrans. form *ḡiqtal*

<sup>10</sup> For adjectives denoting physical defects Aram. uses *qatit*, with lengthening of vowel instead of gemination of R<sub>2</sub> (Heb. *qattit*).

a corresponding trans. (causative) one could be built, either *iaqtil* or *iaqtul*. The form *iaqtul* would take charge of the secondary functions of *iaqtil*, especially in trans. derivatives from a noun with various lexical meanings:



Often there is hardly a semantic difference between denominative *iaqtil* and *iaqtul* although their original status, according to the above hypothesis, would be different. Examples of such an equivalence are given below.

Therefore trans. denom. verbs have the form *iaqtil* in opposition to the corresponding intrans.-pass. type *iig*tal, *iaq*tal. But this purely hypothetical solution must be in the future verified by a careful analysis of the Ar. denominative verbs (of the basic class) which are represented by both *iaqtil* and *iaqtul* for the same verbal root.

Denominative verbs are in the first instance direct derivatives from *is x* (with *x* = noun) and have the meanings 'to be *x*', 'to resemble *x*', 'to behave like *x*' etc., i.e. they are intransitive. Transitive denominative verbs have the meanings 'produce *x*', 'make some thing *x*', 'use *x*', 'desire *x*', etc. According to the distribution suggested above the exponents of the trans. value are *iaqtil*, *iaqtul*, those of the intrans. value *iig*ta (*iaq*tal)<sup>11</sup>.

§ 10. It is not always easy to distinguish between primary and denominative verbs of class I. Even such nouns as the names of the parts of the body may be postverbal, i.e. motivated nouns, the verb itself being primary (non-motivated)<sup>12</sup>.

Examples of denominative \**iig*tal<sub>n</sub> (Ar. *iaq*tal<sub>n</sub> or *iaq*tul<sub>n</sub>)<sup>13</sup>: 'anfu<sup>n</sup> 'nose' > 'anifa 'to be haughty, to disdain'; baṭnu<sup>n</sup> 'belly' > baṭina 'to have a full belly', baṭuna 'to be bigbellied'; ra'su<sup>n</sup> 'head' > ra'usa 'to be chief-

<sup>11</sup> Cf. the great number of O. Ind. and Lat. deponents representing denominative verbs.

<sup>12</sup> Terms like Ar. *kabidu<sup>n</sup>* 'liver' or *ḡariku<sup>n</sup>* 'hip, behind', Heb. *kāḇēd*, *ḡārēch*, seem to go back to verbs meaning 'to be heavy' (liver = the heavy organ as against lungs) or 'to be (move) behind' (Akk. (*w*)arāku). But these terms may themselves become basic forms of denominative verbs, cf. Ar. *kabida* 'to have one's liver out of order' or *ḡarika* 'to have broad hips'.

<sup>13</sup> The „imperf.“ of both *qatila* and *qatula* was originally *iig*tal<sub>n</sub> (cf. chap. IV, § 21).

tain'; *riḡlu<sup>n</sup>* 'foot' > *raḡila* 'to be a pedestrian, to walk'; *ḡahru<sup>n</sup>* 'back' > *ḡahira* 'to have backache', *ḡahura* 'to have a strong back'; *lisānu<sup>n</sup>* 'tongue' > *lasina* 'to be eloquent'. Cf. Heb. (where the types *qatila*, *qatula* are rare) 'af 'nose' > 'ānef 'be angry'.

Denominative verbs belonging to class I of conj. I have in Ar. the vowel *i* or *u* (*a* conditioned by „laryngeals“). In Heb. owing to the elimination of *i* in class I (chap. IV, cf. § 19) we find only *u* (*a* in the neighbourhood of „laryngeals“). Cf. Ar. *katafa* (*i*) „strike on the shoulder“ (< *katifu<sup>n</sup>*); *ḡaraka* (*i*) 'put on the hip, strike on the hip' (*ḡariku<sup>n</sup>*); *daḡana* (*u*) 'lean upon the chin, strike on the ch.' (*daḡanu<sup>n</sup>*); *lasana* (*u*) 'seize one's tongue' (*lisānu<sup>n</sup>*). Hesitation between *i* and *u* in 'anafa 'strike on the nose' (< 'anfu<sup>n</sup>); *kabada* 'hurt one's liver' (*kabidu<sup>n</sup>*)<sup>14</sup>. With R<sub>2</sub> = 'laryngeal': *ra'asa* (*a*) 'act as chieftain, administrate' (*ra'su<sup>n</sup>*); *ḡahara* (*a*) 'throw behind one's back, strike on the back' (*ḡahru<sup>n</sup>*).

Heb. *ḡe'zōr* 'gird one's loins' (< 'ezōr 'loin-cloth'); *ḡe'pōd* 'make the dressing sitting close' ('eḡōd 'ephod of the priest'); imperat. *h'anoḡ* 'dedicate' (*heḡ* 'palate'); *ḡeḡtōm* 'restrain' (M. Heb. *ḡeḡtōm* 'snout, muzzle'); *ḡaḡlōm* 'dream' (*h'elōm* 'dream'); *ḡaḡtōm* 'seal' (*ḡōḡpām* 'seal'); *ḡiḡpōr* 'count' (*seḡer* 'scroll'); *ḡa'aḡōb* 'seize at the heel; beguile' ('aḡēb 'heel'); *ḡa'aḡōf* 'break (the neck)' ('ōḡef 'neck'); *ḡiḡšbōr* 'buy grain' (*šēḡēr* 'corn, grain'). With R<sub>3</sub> = 'laryngeal': *ḡiḡhra* 'kneel down' (*krā'aḡim* 'shanks'); *ḡiḡfrā* 'let loose (the hair)' (*pēra* 'the loose, unbraided hair of the head').

§ 11. In order to form denominative verbs Akk. has generally recourse to *derived* verbal classes (II<sub>1</sub> etc.), e.g. *aḡāzu* 'take' > *iḡzu* 'trimming' > *uḡḡuzu* 'to trim'; *karāšu* 'gnaw' > *karšu* 'slandering, calumny' > *kurrušu* 'to slander'. Still there may exist examples of class I like *iḡliḡ* 'to do a thing the third time' < *ḡalāšu*<sup>15</sup>.

A later chronological layer of denominative formations goes back to nominal sentences as represented by Akk. *ḡarrāku* 'he is king', *sinniḡā* 'they are women' (chap. IV § 2, chap. VII § 23). In West Sem. a split took place between nominal sentences consisting of the verbal adjectives *qatal*, *qatil*, *qatul* plus agglutinated personal pronouns (hence the West Sem. „perf.“) and all the other nominal sentences where the agglutinated

<sup>14</sup> Up to now the semantic difference between *i*-grade and *u*-grade in denominative verbs has not been determined.

<sup>15</sup> The lack of a special morphological exponent does not permit to draw a neat distinction between the primary and the secondary (denominative) verbs of class I. Semantic criteria (as in the case of Ar. *kabida*) are not always cogent. There is the possibility of 1. primary verb → 2. deverbative noun → 3. denominative verb, where 3. is structurally identical with 1. though differing by its meaning. Cf. e.g. (tentatively) Heb. *ḡāḡar* 'to be bound' → *ḡēḡēr* 'ban, spell' → *ḡāḡar* 'to bind, ban (by a charm)'.

form was replaced by the full (independent) form of the pronoun. Cf. Ar. *'anā malikū<sup>n</sup>, hunna nisā'u<sup>n</sup>*.

West Sem. incorporated the forms *qatal*, *qatil*, *qatul* plus pronominal elements into the inherited conjugational system, associating the intrans. verbal adjectives *qatil*, *qatul* with conj. Ib and II, the trans. *qatal* with conj. Ia. Cf. *supra* chap. IV, § 4. The inherited „imperf.“ remained the representative form of the denominative verbs of class I.

In Akk. the nouns or adjectives of the nominal sentences like *šarrāku*, *parsāku* did not undergo any apophonic changes (putting apart the mechanical, phonetically conditioned syncope of a short internal vowel). Therefore the Akk. stative may be regarded as a denominative verb without apophony. Whether or not this fact could have influenced the corresponding preterite and present, where the inherited denominative verbs must have known an ablaut, is a moot question which can be answered only after their occurrence in Akk. has been determined and their list has been drawn up with a fair degree of certitude.

## Chapter X. THREE SEMITIC METRICS

§ 1. The *natural* rhythm of language is founded upon the accent of the word preceded or followed by unaccented elements, i.e. proclitics and/or enclitics. This rhythm is independent of the character of the accent which may be fixed or free and mobile. Though the function is *diacritic* and *morphological* in the latter, *delimitative* in the former case, the *culminative* function is common to both types, the accented syllable representing the *rhythmical center of the word*.

It is true that accent may prove prosodically redundant if the syllable in question is already sufficiently characterized as the rhythmical center. Thus certain vocalic distinctions, qualitative or quantitative, may be permitted only in *one* syllable of the word. Its privileged position renders redundant the stress or the pitch serving to underline it. In French the opposition between long and short, between closed and open (or tense and lax) vowels is neutralized in non-final syllables. In Classical Armenian the final syllable of the word, the only one where the continuations of the I.E. diphthongs offer a special form (*ē*, *oy*), has therefore a more varied structure than all the others. It seems that in such languages the speaker is less conscious of the dominance (of stress or pitch) of the accented syllable than in other cases. But this fact does not exclude the objective existence of a rhythmical center of the word determined by certain factors: stress, pitch, syllable-structure.

§ 2. The problem to be treated here is that of the factors triggering the change of the *natural* rhythm, based on the accent of the word, by the *quantitative* rhythm proper to the metre of Classical Arabic as well as of a series of I.E. languages: Greek, Latin, Sanskrit, Persian. The modern reader acquainted with European poetry of our millennium is struck by the metrical artificiality of the classical versification, Greek and Latin, in spite of its high and often unique artistic value, but such an impression is not unjustified given the profound difference between the natural rhythm and the classical metre.

In languages where *vocalic* quantity is pertinent and serves as basis for a quantitative distinction of *syllables*, the latter is hierarchically sub-



ordinate to accentuation. Within the word there is as a rule *one* accented syllable as against all the others. The unaccented ones can be subdivided into *long* and *short* syllables since being unaccented they are all of the same order. But an opposition *long accented* : *short accented* requires the confrontation of *two words*. This is the reason why in colloquial language the natural rhythm, founded on word-accent and morphological junctures, necessarily dominates the quantitative rhythm based upon syllabic structure.

The hierarchy *accent* → *quantity* makes us modify our problem in the following way: why and how has word-accent lost its rhythmical function transferring it to the subordinate and secondary factor of syllabic quantity?

§ 3. The traditional distinction between *dynamic* and *musical* accent as well as the opinion that the latter cannot function as ictus (*temps fort*) are obsolete nowadays. If we define musical accent as one which does not entail quantitative or/and qualitative differences between the accented and the unaccented vowel system, we may consider e.g. Czech accentuation as corresponding to this definition. Nevertheless it is the (delimitative) accent of the word which plays the essential part in the Czech metre.

In order to answer our question let us consider certain rules proper to the quantitative metre of some I.E. languages, well attested e.g. in Greek. Here are the most characteristic details:

1) Elision of short and shortening of long vowels before an initial vowel of the following word. Whereas in prose these rules are *morphological*, i.e. apply only within well-defined syntactical combinations (e.g. after prepositions: μετ' αὐτοῦς, δι' ὀργῆς, conjunctions or the article, chiefly after proclitic elements), they become general and mechanical within the verse, e.g. μύρι' Ἀχαιοῖς ἔλγε' ἔθηκε. With regard to spoken language μύρι' and ἔλγε' represent deformations dictated by metrical convention.

2) Change of syllabation: a final consonant belongs to the initial vowel of the following word, and *vice versa* the first element of an initial cluster belongs to the final vowel of the preceding word: μῆνι-νᾶ-ειδε, ἔξ ἄρα > ἐκ-σά-ρα, Ἀἰδι προῖαψεν > Ἀι-διπ-ροῖαψεν. These examples show the simultaneous deformation of two words.

3) There are some other rules of sandhi, working only in a restricted measure in prose, but applicable to any contiguous words of the verse or hemistich. Thus the gemination of the initial sonorant in Homeric δόρυ μέγα > δό-ρυμ-μέγα copies the gemination of compounds like Πελοπόννησος. The lengthening of initial vowels (hence also of initial syllables) in Homer, of final vowels in the Rigveda, is also nothing else than a metrical imitation and generalization of the internal sandhi of compounds.

In this way phonetic phenomena, restricted in prose by morphological or syntactical factors, have been transferred into the metre and *generalized*.

§ 4. In Latin and in Sanskrit the situation is much the same, although there are divergencies in details, e.g. contraction instead of elision in Sanskrit. As regards Persian cf. the rule that a *heavy* syllable (i.e. ending in long vowel plus consonant, or else in a consonant cluster) is equivalent to *long plus short* (— ∪), e.g. *farzand* = *far-zan-də*; *ič* = *ī-čə*. In spoken language the insertion of *ə* is ruled by syntactical factors, taking place only between the members of a compound or within close-knit syntactical groups. The constellation -T (final consonant) + E- (initial vowel) may have two metrical values, either -T + E- or -TE-, thus *nabūd īč farzand* 'there was no child' > *na-bū-dī-čə far-zan-də*. Before a following consonant the syllabation would be *na-bū-də*.

§ 5. The chief metrical rules of Greek may be resumed in a few succinct formulae (T = consonant, E = vowel):

words	in	-Ē	become	words	in	(-Ē), i.e.	either	in	-Ē	or	in	zero
"	"	-Ē	"	"	"	-Ē, i.e.	"	"	-Ē	"	"	-Ē
"	"	-T	"	"	"	(-T), i.e.	"	"	-T	"	"	zero
												(with T detached)
"	with	E-	"	"	"	(E-), i.e.	"	with	E- or with	zero		
									(with E detached)			
"	"	T <sub>1</sub> T <sub>2</sub> -	"	"	"	(T <sub>1</sub> )T <sub>2</sub> -, i.e.	"	with	T <sub>1</sub> T <sub>2</sub> - or with			
									T <sub>2</sub> - (with T <sub>1</sub> detached)			

The phonemic form of the word becomes *variable* in the metre. Even an anteconsonantal *μῶρις* of the metre is not identical with the form *μῶρις* of the prose since its final -*α* is *conditioned*. The important phenomenon, however, is the metrical *deformation* of words. Owing to the syllabation *μῆνι -νᾶ-ειδε* the cohesion between the final -*ν* of *μῆνι* and the *α*- of the following word becomes stronger than the cohesion between -*ν* and the preceding -*ι*- *belonging to the same word*.

We thus arrive at the essential conclusion: the deformation of the word deprives the accent of its natural basis. Accent is a supralinear quality of the word. Pertinent accentual oppositions are established by *permutation*, like *ᾱ̄* (barytone) : *ᾱ̇* (oxytone), not by *commutation*, since in the latter case (substitution of *unaccented* for *accented* or *vice versa*) there would be at the same time a change in the environment (*accented* for *unaccented* or *vice versa*). The phonemic analysis of a word like *μῶρις* is therefore not *μῶ + ρι + α*, but *(μῶ + ρι + α) + superimposed accent* (on the syllable *μῶ*), an accent representing a *hierarchical relation between the syllables of the word*. Accent presupposes the existence of *phonemically*

*defined syllables* which it organizes into a rhythmical structure. Deprived of this phonemic substratum it ceases to exist. Whereas the word  $\mu\acute{\upsilon}\rho\iota\alpha$  has an accent, the latter is lacking in the deformation  $\mu\upsilon\rho\iota(\alpha)$ .

§ Once we recognize the intrinsic bond between the suppression of morphological junctures, entailing the phonemic modifications of words on the one hand and the elimination of word-accents on the other, we are faced with two other questions:

1) What is the direct consequence of such a metrical elimination of accents? Does it necessarily imply the rise of a quantitative metre?

2) How are we to explain, from *the genetic point of view*, the above-mentioned metrical modifications or deformations of words?

(1) Once accentuation is suppressed, the old accented syllables are on a par with all the rest. The chief factor of rhythm having disappeared, isosyllabism consisting in a fixed number of syllables would probably represent the natural approach to an elementary metrical organization. But in a language with phonemic quantity a more refined metre becomes henceforth possible. The opposition between long and short syllables, up to then dominated by the contrast *accented* : *unaccented*, can be now exploited as rhythmical factor. The lengths serve in the first place to characterize certain key-positions within the verse, e.g. the cadence. Then the whole verse may be organized according to rigid rules of alternation of long and short syllables. Finally, the introduction of metrical equivalences (*responiones*), e.g.  $\cup\cup = \text{—}$ , or  $\text{—} = \cup\text{x}$ , completes the triumph of the quantitative principle, with isosyllabism being only an accidental, non-obligatory feature. Thus e.g. hexameters are isosyllabic only as regards the fundamental form (5 times  $\text{—}\cup\cup$  plus  $\text{—}\cup = 17$  syllables), but in practice their length hesitates between 13 and 17 syllables. A constant number of syllables is predictable only for the last third of the hexameter (the last [two] feet), [since the substitution — for  $\cup\cup$  is exceptional in the fifth dactyl.

§ 7. (2) The changes imposed on the word-form by the quantitative metre are explained by a single principle: generalization of the sandhi originally proper to compounds or to fixed (close-knit) syntactical groups. Entailing the elimination of morphological junctures the metrical sandhi has the function of *delimiting the verse or the hemistich from other metrical units of the same rank*. The verse or the hemistich is treated as if it represented a single word or rather a single compound. Hence the suppression of morphological junctures between words and the levelling of the difference between accented and unaccented syllables through loss of word-accents. Between the syllables a new hierarchy, based on quantity, becomes henceforth possible, though not at all compulsory.

The opposition between *morphological* articulation, e.g.  $\tau\acute{o}\nu\ \acute{\alpha}\nu\delta\rho\alpha$ ,

μετ' αὐτόν, and *syllabic* articulation, an opposition existing in colloquial language, becomes productive in the metre though undergoing an important shift of function. Syllabic articulation prevails *within* the verse (μῆ — νι — νῶ — εἰ — δε). Morphological articulation (end of word) is the signal of a *metrical pause* (cadence, caesura). As long as the morphological junctures separating words are respected, word-accent continues to function as the rhythmical factor *par excellence*. But syllabic articulation pushed to the extreme eliminates it completely.

The probability of a *gradual* development from accentual to quantitative metre (in languages with phonemic quantity) must not be overlooked. The metrical elimination of word-accents could have taken place first in the case of *short* accented syllables, the long accented ones still carrying the ictus. Such a fact would entail a metrical differentiation within the originally *unaccented* syllables, a secondary ictus establishing itself on the long ones. The final outcome would consist in the metrical merger of the old accented and the old unaccented long syllables.

§ 8. *Just as phonemic mergers are preceded by gradual phonetic shifts, even so the metrical identification of external with internal sandhi postulates the previous weakening of word-accents via accentual differentiation (into stronger and weaker accents) and accentual integration of word-groups.* Such an accentual differentiation favours the gradual rise of metrical sandhi. From the *functional* point of view, however, it is the *identification of the metrical sandhi with word-internal sandhi* which seals the fate of autonomous word-accents.

§ 9. To what degree the above conclusions may be applied to the problem of the Arabic metre? It is a fact that the Ar. verse was built upon an opposition of long and short syllables and did not respect word-accent, an accent conditioned, just as in Latin, by the *syllabic structure* of the word. But it is at the same time clear that rules of metrical sandhi comparable to those of Greek can hardly be posited for Arabic. Since every Ar. word begins with a simple consonant and ends either with a simple consonant or with a vowel, conditions favouring a non-morphological syllabation of words do not exist. There is a small number of forms with initial prothetic vowels, like *ibn(at)u<sup>n</sup>*, *ismu<sup>n</sup>*, *istu<sup>n</sup>*, certain verbal forms (imperative, the type *infa'ala* etc.), cf. also the article. In the metre the prothetic vowel does not appear after a preceding final vowel, and belongs to a preceding final consonant. E.g. *qāla uskut* > *qā-las-kut*; *qālat uskut* > *qā-la-tus-kut*; *naṣru allāhi* > *naṣ-rul-lā-hi*. Such forms could of course contribute to the elimination of morphological junctures dividing words, but at the same time they seem to provide too narrow a basis for a general explanation of the quantitative metre of Arabic.

§ 10. We have seen that in Greek and in several other I.E. languages the metre *generalized* certain procedures (e.g. elision) subject in prose to definite syntactical conditions. One may therefore ask if such a relation did not exist in Arabic, between colloquial language on the one hand, that of poetry and of the Koran on the other. The relevant phenomenon seems to be the fate of final short vowels playing a considerable role in nominal and verbal morphology viz. characterizing the majority of the inflectional forms of the classical language.

The difference between poetry and colloquial language may be partially ascribed to *dialectal* divergencies between sedentary population and the bedouins. According to the testimony of the grammarian Ǧahīz the latter fully preserved the inflectional endings still in the first half of the 9th century. Cf. J. Fück *ʿArabiyya* (French translation by C. Denizeau, 1955) p. 101. In the index of this work we find references to testimonies concerning the confusion of endings, both of cases and of moods, which very early has taken place among sedentary population (even among cultured speakers). The internal factors governing the decline of inflection are defined by Fück in the following way (*op. cit.* p. 91): „The inflectional endings appear in Old Ar. — like in I.E. for that matter — only in the syntactical context of speech, and are lacking before any semantic pause whatever, especially at the end of the phrase; also in speech with slow articulation of each separate word“.

§ 11. At any rate the Ar. desinences, depending on the syntactical context, hence predictable and redundant, were early menaced by syncope. It is understandable that there must have existed a certain gradation conditioned by syntactical or phonetic factors. An unusual word-order like in *ḡaʿid ibtalā ʿIbrahīma rabbuhu* (Koran 2, 118) „when the Lord tried Abraham“, with the direct complement *preceding* (instead of *following*) the subject, implies the preservation of the *-a* of the acc. (and the *-u* of the nom.). For other examples in Cantineau's introduction of the translation of Fück's work cf. *ibid.* p. 3.

On the other hand, even after the loss of final short vowels, the desinences were preserved in non-final position, thus in the construct state of the noun, e.g. *naṣru-llāh*, or before pronominal suffixes attached to the noun or to the verb, e.g. *kitābi-hi*, *kitābu-hu*, *ḡaraba-nī*.

Even in poetry and in the recitation of the Koran the short final vowels (and nunation) are dropped at the end of the verse. E.g.:

*ḡālat liḡa nnaṣu ʿatāka rradā ḡaʿanta fī dāri lmaʿāṣī muḡim*  
*tazaḡḡadi ttaḡā faḡultu ḡṣurī lā iḡḡmalu zzādu lidāri lkarīm*

‘My soul said to me: „Death has come to thee while thou art staying in the abode of disobedience. Provide thyself with piety“; I said:

„Leave it. One does not bring provisions to the abode of the Merciful“.

The rime *muqīm* : *karīm* is possible only owing to the loss of *-un* in *muqīm* and of the *-i* in *(al)karīm*. But notice the preservation of *-u* in *(an)nafsu*, in spite of the following syntactical pause, and in *(az)zādu*. The sandhi of prose restricted to close-knit syntactical groups is generalized within the verse.

§ 12. The precarious status of the inflectional desinences *-u*, *-i*, *-a* seems to account for a strange phenomenon concerning the grammatical terminology of Arabic. The first grammarian to describe the whole of Classical Arabic, Sībawayh (2<sup>nd</sup> half of the 8<sup>th</sup> century), uses the following nomenclature:

*raf'* = *-u(n)*, ending of nominative or of indicative

*ǧarr* = *-i(n)*, ending of genitive

*naṣb* = *-a(n)*, ending of accusative or of subjunctive,

whereas from the phonetic point of view the short vowels *ū*, *ī*, *ā* are called *fath*, *kasr* and *ḍamm*, respectively.

Consequently two series of terms are to be distinguished. The second series refers to the vocalic phonemes *ū*, *ī*, *ā*. The first does not envisage morphemes, but rather the flexional *morphs* *ū*, *ī*, *ā*. The procedure consists in subordinating function to phonemic form, reversing the hierarchy current in European grammars. It would be considered absurd to group together e.g. the *-s* of *(he) writes* and the *-s* of *(the) book-s*.

What is the meaning of this terminology? What is the functional bond uniting the desinences *-u*, *-a* of the noun with the desinences of the verb, but not the endings *-ū(na)*, *-ā(ni)* of the noun with those of the verb (*īaktubū(na)*, *īaktubā(ni)*)? It may be conjectured that the term *raf'* referred to the independent case or mood, and the term *naṣb* to the case or mood (of the subordinate clause) governed by the verb (of the main clause). But there is more to it. It seems that it was the alternation of *-u*, (*-i*), *-a* with zero, their presence or absence conditioned by style (familiar, vulgar, literary, poetic...) which was perceived as their essential quality. In classical poetry *-u*, *-i*, *-a* (as against *-u<sup>n</sup>*, *-i<sup>n</sup>*, *-a<sup>n</sup>*) were always short syllables, except at the end of the verse where they were dropped.

§ 13. On the contrary, in colloquial language it is the form of the *pause*, where these vowels are lacking, which is fundamental. The relation between the full and the apocopated forms is thus reversed in colloquial language. Cf.

	general rule	exceptions
poetry	preservation of <i>-u(n)</i> , <i>-i(n)</i> , <i>-a(n)</i>	apocope at the end of the verse

colloquial  
language

apocope

preservation in the con-  
struct state and before  
pronominal suffixes

The diagram gives an idea of the opposition which was developing and becoming more and more pronounced already at the beginning of the historical period if not before. This contrast explains the status of Ar. versification whose metre consists in a high degree in deforming the current syllabation of words. E.g. *ra-ḡul* > *ra-ḡu-lu* (-li, -la), *kalb* > *kal-bu* (-bi, -ba), *qatal* > *qa-ta-la*. There is also, owing to the confusion between the indicative and the jussive, the inverse possibility: colloquial language *ḡak-tu-bu-hu* (which may function as jussive) as against *ḡak-tub-hu* in poetry.

The changes of syllabation brought about by the addition of short vowels which did not exist in colloquial language or appeared there only in predictable positions, must certainly have been perceived as artificial (like other metrical licences). Since the verse presented features which in the colloquial language were proper only to the construct state and to words provided with pronominal suffixes, it must have made the impression of a very coherent unit of integrated syllables, and not words (whose final consonants were frequently detached from the rest of the word by redundant short vowels). Word-accent, the base of natural rhythm, had thus been totally eliminated, and quantitative rhythm based on a syllabation which did not respect morphological junctures, could be introduced in its place.

§ 13a. The chief difference between the Greek and the Ar. metres lies in the so-called „responsiones“ (metrical equivalences). In Greek there is the possibility of the substitution of — for ∪ ∪ (e.g. in the thesis of the dactylic hexameter), and vice versa (e.g. in the arsis of the iambic trimeter). For the linguistic basis of these „responsiones“ cf. *Die sprachlichen Grundlagen der altgermanischen Metrik* (Innsbrucker Beiträge zur Sprachwissenschaft, 1970, p. 5 ff.). The „responsiones“ of the Classical Ar. metre are also based on its linguistic system. There are in Ar. no words of the structure *consonant + short vowel*, prepositions like *bi*, *li*, particles like *ʾa*, *la*, etc., being treated like prefixes. A short stressed syllable forms an indissoluble unit with the following one. Words like *laka* „to thee“ or *banā* ‘he has built’ have a *minimal* syllabic weight equal to that of *man* ‘who’ (short + consonant) or *mā* ‘what’ (long vowel). The syllables of *laka* or *ʾanā* form blocks replaceable by a single long syllable as in *man* or *mā*. On the other hand, they are mutually replaceable by each other. Finally, the equivalence of ∪ — and — permits the metrical omission of a short syllable. All these equivalences occur only in the *thesis*, i.e. outside the kernel ∪ ⊥ of the metrical foot. E.g.





§ 16. Besides initial accentuation Germanic had also word-internal accentuation, viz. in compound verbal forms (cf. English *belong*, *forgo*) and their derivatives, and *compound* accentuation in *nominal* compounds and their derivatives. E.g. *house-door* with phonemically (or rather prosodically) pertinent accent on the first member and a secondary accent on the second, the latter *conditioned* by the preceding morphological juncture. In the metre, however, such a secondary accent was *anceps*. It could function either as an *arsis* (= as metrical accent) or as a *thesis* (= lack of metrical accent). Even the accent of simple words could be treated as secondary, i.e. as a *metrical* lack of accent. This was due to the tendency to integrate the hemistich, whatever its length, into *two accented word-complexes*. The two metrically pertinent accents did not of course exclude the *phonetic* existence of several other accents of different degrees which were metrically non-relevant (i.e. functionally on a par with lack of accentuation).

§ 17. Hebrew offers an interesting parallel of this metrical peculiarity. Not only a proclitic or enclitic element but also accented words may lose their accent in the metre. Word-accent either becomes a metrical accent (*accentus dominus*) or loses its function in the metre; in spite of being phonetically only weakened (*accentus servus*) it is metrically equivalent with lack of accent. This is again an effect of the metrical integration of the hemistich into a constant number of word-complexes („feet“), each of them carrying *one* metrical accent.

Otherwise than Germanic Heb. has at its disposal an objective means of neatly delimiting the accented word-complexes of the hemistich: lenition of initial *b-*, *d-*, *g-*, *k-*, *p-*, *t-* after a final vowel *within the metrical word-complex*. Obligatory in colloquial language at the internal junctures of close-knit syntactical groups, functionally corresponding to I.E. compounds (*status constructus*), lenition is in the metre independent of the syntactical relation of the members of the metrical complex. But compared to the generalization of internal sandhi in Greek etc. the Heb. phenomenon is restricted. There is no lenition at the juncture dividing the metrical word-complexes (the „feet“ of the hemistich).

§ 18. Cf. the following examples of the 1. book of the Psalms <sup>2</sup> (x̄ = ac-

<sup>2</sup> Three chronological phases of O. Heb. metrics may be tentatively conjectured according to S. Segert (Mitteilungen des Instituts für Orientforschung XV, 1969, p. 312—321):

- I. „Wortmetrik“ (before 1000 B. C.),
- II. „Akzentuierende Metrik“ (about 1000—600 B. C.),
- III. „Alternierende Metrik“ (postexile period).

Without entering into a discussion of this hypothesis let us observe that the bulk of the Psalms may be safely attributed to period II. Moreover the tradition

*centus dominus*,  $\acute{x}$  = *accentus servus*), where the lack of lenition corresponds to the juncture between two accentual word-groups of the hemistich:

Ps.	II, 11	<i>uḡzīlū   bir'ādā</i>
	II, 12	<i>'ašrē   kāl-hōsē bō</i>
	V, 6	<i>'sānē'pā   kāl-pō'alē 'āuēn</i>
	V, 8	<i>'eṣtah<sup>auē</sup> 'el-hēchāl qāḏšchā   bīir'āpēchā</i>
	V, 13	<i>kī-'attā   tḡārēch ṣaddīq</i>
	VI, 3	<i>hānnēnī iḡuā   kī 'umlāl 'ānī</i>
	VI, 8	<i>'āpquā   bchāl-ṣōrrāi</i>
	VI, 9	<i>sūrū mimménī   kāl-pō'alē 'āuēn</i>
	VIII, 2	<i>mā-'addīr šimchā   bchāl-hā'āreṣ (= VIII, 10)</i>
	VIII, 7	<i>tamšilēhū   bma'asē iāḏēchā</i>
	IX, 2	<i>'asapprā   kāl-nifl'ōpēchā</i>
	IX, 15	<i>lmā'an 'asapprā   kāl-thillāpēchā</i>
	IX, 15	<i>'āzīlā   bišū'āpēchā</i>
	X, 6	<i>'āmār blibbō   bal-'emmot</i>
	X, 9	<i>iaḡ<sup>atōf</sup> 'ānī   bmāschō bīrīstō</i>
	X, 11	<i>histīr pāndīō   bal-rā'ā' lānēṣah</i>
	XI, 4	<i>'af'appā'īō iḡbḡanū   bnē 'ādām</i>
	XIII, 2	<i>'ād-ā'nā iḡuā   tiškāhēnī nēṣah</i>
	XIII, 5	<i>šārāi iāzīlū   kī 'emmot</i>
	XIV, 4	<i>hālō' iāḏ'ū   kāl-pō'alē 'āuēn</i>
	XVI, 2	<i>tōḡbāpī   bal-ālēchā</i>
	XVI, 3	<i>u'addīrē   kāl-hēṣī-bām</i>
	XVI, 5	<i>'attā   tōmēch gōrālī</i>
	XVI, 8	<i>kī mīmīnī   bal-'emmot</i>
	XVII, 2	<i>'ēnēchā   tēhēzēnā mēšārīm</i>
	XVII, 3	<i>zammoḡī   bal-ia'ābār-pī</i>
	XVII, 6	<i>'anī qā'pīchā   kī-pā'anēnī 'ēl</i>
	XVII, 8	<i>šāmrenī   k'īšōn baḡ-āḡin</i>
		<i>bṣēl knāfēchā   tastīrenī</i>
	XVIII, 8	<i>uāiḡḡgā'asū   kī hā'rā lō</i>
	XVIII, 19	<i>iḡaddmūnī   biḡm 'ēdī</i>
	XVIII, 20	<i>iḡallšēnī   kī hāfēs bī</i>
	XVIII, 22	<i>kī-šāmartī   darchē iḡuā</i>
	XVIII, 29	<i>kī-attā   tā'ir nērī</i>
	XVIII, 39	<i>iḡpplū   tāḡaḡ razlāi</i>
	XX, 2	<i>iā'ančā iḡuā   biḡm šārā</i>

concerning the distribution of *primary* and *secondary* accents and *external* sandhi (lenition of *initial* occlusives) may be considered a reliable data as long as no internal contradictions are shown up.

- XX, 9 *hemmä | kār'ù unāfālū*  
 XXI, 3 *uā'arēšēḡ sfāpāiō | bal-mānā'tā sēlā*  
 XXI, 4 *kī-ḡqaddmēnnū | birchōḡ ṭōḡ*  
 XXI, 6 *gādōl kbōdō | bišū'āḡēchā*  
 XXI, 9 *iminchā | timṣā' son'ēchā*  
 XXI, 12 *hašbū mzimma | bal-iūchālū*  
 XXI, 14 *nāšīrā unzamarā | ḡbūrāḡēchā*  
 XXII, 2 *rāḡōq mišū'āḡī | diḡrē sā'azāḡī*  
 XXII, 5 *beḡ | bāthū 'āḡōḡēnū*  
 XXII, 9 *iaṣṣilēhū | kī hāfēṣ bō*  
 XXII, 10 *kī-'attā | ḡḡhī mibbāṭēn*  
 XXII, 12 *'al-tirḡāq mimmēnnī | kī ṣārā' ḡrōḡā*  
 XXII, 13 *sḡāḡūnī | pārīm rabbīm*  
 XXII, 15 *hāiā' libbī | kaddōnāḡ*  
 XXII, 17 *kī-sḡāḡūnī | klāḡīm*  
 XXII, 24 *uḡūrū mimmēnnū | kāl-zēra' iisrā'ēl*  
 XXII, 26 *mē'ittchā ḡhillāḡī | ḡḡhāl rāḡ*  
 XXII, 28 *uḡiṣtah<sup>u</sup> lfanēchā | kāl-mišḡhōḡ ḡōiṡm*  
 XXIII, 5 *diššāntā ḡāšṣēmēn rō'ṣī | kōṣī ruāiā*  
 XXIII, 6 *'āch ṭōḡ uāḡēṣēḡ iirdfūnī | kāl-iṡmē ḡaiiāi*  
 XXIV, 3 *mī-ia'<sup>alē</sup> | bhār iḡuā*  
 XXIV, 6 *zē | dōr dōrsāu*  
 XXV, 5 *'ōḡchā' ḡiḡuḡīḡī | kāl-ḡaiiōm*  
 XXV, 11 *uṣālaḡtā' la'<sup>uōnī</sup> | kī rāḡ-hū'*  
 XXV, 12 *iḡrēnnū | bḡrēḡch iḡḡhār*  
 XXV, 13 *naṣṣō | biḡōḡ tālīn*  
 XXVI, 3 *uḡiḡhallāchtī | ba'amittēchā*  
 XXVII, 2 *hemmä | kāslū unāfālū*  
 XXVII, 5 *iastirēnī | bsēḡḡr 'āḡolō*  
 XXVII, 11 *unḡēnī | b'ōrah mīšōr*  
 XXVII, 12 *'al-tittnēnī | bnēṣēṣ ṣārāi*  
 XXVIII, 3 *urā'ā | bilḡāḡām*  
 XXX, 10 *ma-bbēṣā' bḡāmī | briḡtī 'ēl sāḡaḡ*  
 XXXI, 4 *ulmā'an ṣimchā | tanḡēnī uḡḡnah<sup>alēnī</sup>*  
 XXXI, 8 *'azīlā u'ēsmḡā | bḡasḡēchā*  
 XXXI, 8 *iāḡā'tā | bṣārōḡ naṣṣī*  
 XXXI, 9 *uḡō' ḡisḡartānī | biāḡ-'ōiēḡ*  
 XXXI, 13 *nīṣkaḡtī | kmēḡ millēḡ*  
 XXXII, 3 *kī-ḡḡḡrēṣtī | bālū 'aṣāmāi*  
 XXXII, 11 *bṣā'azāḡī | kāl-ḡaiiōm*  
 XXXII, 11 *uḡarnīnū | kāl-iisrē-lēḡ*

XXXIII, 4	<i>u</i> chāl-ma'aséhū   bē'mūnā
XXXIII, 6	uṭrūah pīō   kāl-sbā'ām
XXXIII, 8	mimmēnnū iāzūrū   kāl-iōšbē pēbēl
XXXIV, 9	ta'amū ur'ū   kī-tōb ihoṣā
XXXIV, 23	ulō' iē'smū   kāl-haḥosīm bō
XXXV, 2	uqūmā   b'ezrāpī
XXXV, 5	iīhū   kmōs lifnē-rūah
XXXV, 9	unafśī   tāzīl baihoṣā
XXXV, 12	išallmūnī rā'd   tāhaḥ tōbā
XXXV, 18	'ōdchā   bqāhāl rāb
XXXV, 25	'al-iō'mrū   billa'anūhū
XXXV, 28	ulšōnī   tēhgē sīdḡechā
XXXVI, 7	'ādā'm uḥemā   tōšiq' ihoṣā
XXXVI, 13	šā'm nāflū   pō'alē 'ā'ne
XXXVII, 6	umišpātēchā   kaššāhōrā'im
XXXVII, 13	kī-rā'd   kī-iābō' iōmō
XXXVII, 19	lō'-iēbōšū   b'ēḥ rā'd
XXXVII, 25	nā'ar hā'īḥ   gam-zāqāntī
XXXVII, 30	ulšōnō   tādabbēr mišpāt
XXXVII, 33	ulō' iarśī'ennū   bhiššāftō
XXXVII, 35	umiḥ'ārē   k'ezrā'h ra'anān
XXXVIII, 15	u'ēn bfīō   tōchāhōḥ
XXXVIII, 17	kī-'āmārtī   pēn-iismhū-lī
XXXVIII, 21	umšallmē rā'd   tāhaḥ tōbā
	iistnūnī   tāhaḥ rād'fī-tōb
XXXIX, 4	dibbārtī   bilšōnī
XL, 4	uībthū   baihoṣā
XL, 9	uḥōrāpchā   bḥōch me'āi
XL, 12	hasdchā' uā'amittchā   tāmīd iisrūnī
XL, 17	'ohābē   tšū'āpēchā
XLI, 3	u'al-tittnēhū   bnēfēš 'ōbāiō
XLI, 5	rfā'ā' nafśī   kī-hatā'ḥ lāch

§ 19. Only apparent exceptions occur in instances like

II, 11a 'ibdū 'ēḥ-ihoṣā' | būir'ā or

(cf. also VII, 18a; XII, 8a; XVIII, 21a; XXI, 14a; XXVI, 9b; XXXIII, 2a; XXXIV, 2a; XXXVII, 5a).

There is a rule requiring the replacement of the last but one metrical accent *˘* of the hemistich by *˘* if it is not followed at least by two unaccented syllables.

## § 20. Examples of tripartite hemistichs:

- I, 3 *uḥāiā | k'ēs | šāḥl 'al-palṣē mā'im*  
 IV, 3 *bnē-īš | 'ad-mē chḥōdī lichlimmā | tē'ehāḥūn rīq*  
 IV, 4 *uā'ū | kī-hiflā' iḥoyā | ḥāsā lō*  
 V, 8 *uā'anī | brōḥ ḥasdechā | 'āḥō' bēḥēchā*  
 XVII, 12 *dimiōnō | k'ariē | iichsōf litrōf*  
 XVII, 13 *qūmā' iḥoyā | qaddmā' fānāiō | hachri'ēhū*  
 XVII, 15 *'anī | bšēḏeq | ēḥēzē fānēchā*  
 XXII, 15 *kammāim nišpachtī | uhiḥpārdū | kāl-'asmōḥpāi*  
 XXII, 24 *iir'ē iḥoyā | hallūhū | kāl-zēra' iā'qōḥ kabbdūhū*  
 XXVI, 1 *šāfṭēnī iḥoyā | kī-'anī | bḥummā ḥālāchtī*  
 XXVI, 11 *uā'anī | bḥummā 'elēch | pḏēnī uḥānnēnī*  
 XXVII, 5 *kī iispnēnī | bsukkō | biōm rā'ā*  
 XXVII, 13 *lūlē' ḥē'māntī | lir'ōḥ bṭōḥ-iḥoyā | b'ērēs ḥaiim*  
 XXXI, 18 *iḥoyā | 'al-ēḥōšā | kī qā'ḥīchā*  
 XXXII, 8 *'asḥilchā | u'ōrchā | bḏerēch-zū ḥelēch*  
 XXXVIII, 15 *uā'ehī | k'īs | 'asḥēr lō'-šomēq'*  
 XXXIX, 4 *ḥam-libbī | bḡirbī | baḥāzīgī ḥiḥ'ar-'ēs*  
 XLI, 8 *iḥad | 'ālāi iḥlāḥāšū | kāl-šon'āi*

## Examples of quadripartite hemistichs:

- XXII, 27 *iō'chlū 'anāim | uisbā'ū | iḥallū iḥoyā | dōršāiō*  
 XXII, 30 *'āchlū ḥaiištahāu | kāl-dišnē-ērēs | lfānā' iō' iichr'ū | kāl-iōrḏē 'āfār*  
 XXIV, 7 (cf. XXIV, 9) *s'ū š'ārīm | rā'sēchēm | uḥinnāš'ū | piḥḥē 'ōlām*  
 XXV, 5 *ḥadrīchēnī ḥā'mittēchā | ḥlammḏēnī | kī-'attā | 'elohē iōš'i*  
 XXXVI, 7 *siḏqāḥchā | kharrē-ēl | mišpātēchā | ḥōm rabbā*  
 XXXVII, 20 *kī rā'īm | iō'bēdū | u'oiḥē iḥoyā | kīqār kārīm*  
 XXXVIII, 13 *uainaqṣū | mbaqšē nafšī | uḏōršē rā'āḥī | dibbrū ḥauqōḥ*  
 XL, 17 *iāšīšū | uīsmḥū | bchā | kāl-mbaqšēchā*

Cf. also XIII, 6a, XVIII, 9a.

§ 21. As regards lenition it is obligatory in the traditional text only *within* the accented word-complex („bar“). The important question to be answered is whether we have to do with a normal phenomenon of colloquial language or — just as in the case of the metrical sandhi of Greek etc. (cf. § 3 ff.) — with a *metrical* generalization of word-internal lenition.

Linguists had been often under the impression that the sandhi attested in old texts like the Rigveda or Homer represented a true picture of the normal articulation of the respective languages. This impression could be only strengthened by the testimony of e.g. Sanskrit prose where, under the influence of the holy (metrical) texts, whole sentences present a chain

without any word-junctures. Already Wackernagel, *Altindische Grammatik* I (1896) p. 306 ff., adopted a more realistic view expressing doubts about the reliability of such notation. The study of modern languages confirms this opinion. In languages like French or Irish the rules of external sandhi are governed by two factors:

1) By accentuation, proclitics or enclitics forming an accentual unit with the following or preceding word, cf. prepositions, conjunctions, the article, e.g. Fr. *sans attendre, l'honneur*.

2) By syntactical cohesion, if the two words in question are in direct syntactical relation and positional contact (B always preceding or always following A). Cf. the Irish sandhi in the case of noun + genitive or adjective, or between a cardinal numeral and the following noun.

If two accented members of the sentence, A and B, may form indifferently either the group A + B or B + A (one of the groups being stylistically neuter and the other marked), an accentual fusion of members („univerbation“) seems excluded, there is only a gradation of word-accents<sup>3</sup>: thus A' + B and B' + A, or A + B' and B + A'. If therefore in the metre the sandhi operates *both* between A' + B and between B' + A (between A + B' and between B + A'), this equality of treatment points to the *metrical* suppression of the weaker accent i.e. to its replacement by the lack of metrical accent.

§ 22. In Heb. there is an inherited stock of proclitics, cf. *lō', zū, kī, kmō, kammā* etc., whereas the conjunctions *uā-, ka-*, the prepositions *bi-, li-*, the article *ha-* have become a kind of unaccented prefixes. An important case are the combinations of *construct state plus following noun* partly corresponding to the nominal compounds of I.E. An intermediate stage between these „compounds“ and syntactical groups is represented by binary and ternary word-groups united by hyphens (Heb. *maqgef*).

As regards the *stylistic* gradation of accents within binary syntactic groups it is always the second member which is underlined since in Heb. the tendency towards univerbation must favour the stress on the final syllable or the penult of the complex.

§ 23. Now in the Heb. metre the combinations A + B' and B + A' may both occur with sandhi (= lenition of stops) operating between the members. Thus the normal word-order of personal verb + direct complement<sup>4</sup> is frequently attested in poetry, e.g.

II, 8 *u'ettnd' zō'im* 'and I will give (thee) the nations'

IX, 6 *gā'artā zō'im* 'thou hast rebuked the nations'

<sup>3</sup> The member with the weaker accent may be called *enclinomenon* or *proclinomenon*, to be distinguished from enclitic or proclitic.

<sup>4</sup> Originally the only possible one, cf. above chap. IV, § 25 f.

- XVII, 1 *ha'azîna pfillâpî* 'give ear unto my prayer'  
 XVII, 15 *'êhezê fânêchâ* 'I shall behold thy face'  
 XXX, 8 *histartâ fânêchâ* 'thou didst hide thy face'  
 XXXI, 17 *hâ'îra fânêchâ* 'make thy face to shine'  
 XXXIV, 11 *lô'-iahsrû châl-tôb* 'they shall not want any good thing'  
 XXXIX, 2 *'êšmrâ drâchâi* 'I will take heed to my ways'  
 XXXIX, 13 *šim'â pfillâpî* 'hear my prayer'

But the reverse order (*direct complement plus verb*) is also attested, cf.

- VII, 13 (*harbô iiltôš*) *qaštô dârâch* (*uaichônnehâ*) 'he will whet his sword, he has bent his bow'  
 XIV, 6 *'ašap-ânî pâbîšû* 'ye put to shame the counsel of the poor'  
 XVIII, 28 *kî-attâ 'am-ânî pōšî'a* 'for thou wilt save the afflicted people'

§ 24. Examples of mutual position of verb and nominal subject. Normally we find V + S:

- II, 1 *lammâ rāzšû zōiim* 'why do nations rage'  
 IX, 16 *tâb'û zōiim bšâhap* 'asû' 'the nations are sunk down in the pit that they made'  
 IX, 20 *iššâftû zōiim* 'al-pânêchâ 'let the nations be judged in thy sight'  
 IX, 21 *iêd'û zōiim* 'let the nations know'  
 X, 5 *iâhîlû drâchâu* 'his ways are firm'  
 X, 16 *'âbîdû zōiim mē'aršô* 'the nations are perished out of his land'  
 XVII, 5 *bal-nâmôtû f'âmâi* 'my feet have not slipped'  
 XVIII, 25 *uaiašêb-ihouâ* lî *chšidqî* 'therefore has Jehovah recompensed me according to my righteousness'  
 But S + V is also attested:  
 XVIII, 36 *uimînchâ* pîs'âdēnî *u'anûâpchâ* pârbenî 'and thy right hand hath holden me up and thy gentleness hath made me great'  
 XXVI, 12 *raḡlî 'âmââ* b̄mîšôr 'my foot standeth in an even place'  
 XXXVII, 15 *harbām tâbô* blibbām 'their sword shall enter into their own heart'

§ 25. Besides verb + (preposition + noun + pronominal suffix) we also find the reverse order (preposition + noun + pronominal suffix) + verb:

- IV, 5 *'imrû bîlbabchēm* 'commune with your own heart'  
 V, 12 *uia'lsû bchâ* 'phbê *šmêchâ* 'let them also that love thy name be joyful in thee'

- IX, 11 *uḡibḡhū bchā iḡd'ē smēchā* 'and they that know thy name will put their trust in thee'.  
 XV, 4 *niḡzē ḡ'ēndāiḡ nim'ās* 'in his eyes a reprobate is despised'  
 XVIII, 7 *tābḡ ḡ'āznāiḡ* '(my cry) came into his ears'  
 XXIII, 5 *diššāntā ḡšēmēn rḡ'sī* 'thou hast anointed my head with oil'  
 XXVII, 6 *u'ēzbhā ḡ'āh'olḡ (zibhē ḡrū'ā)* 'I will offer in his tabernacles (sacrifices of joy)'  
 XXXI, 23 *'āmārti ḡhāfzi* 'I said in my alarm'  
 XXXV, 25 *'al-iḡmrū ḡlibbām* 'let them not say in their heart'  
 XLI, 4 *kāl-miškābḡ hāfachtā ḡhālḡḡ* 'thou turnest all his bed in his sickness'

Reverse order in:

- VI, 2 *'al-b'appchā ḡōchihēni*  
*u'al-bahāmāpchā ḡiassrēni* 'rebuke me not in thine anger, neither chasten me in thy hot displeasure'  
 XIII, 6 *bhasdechā ḡātāhtī* 'I have trusted in thy loving-kindness'  
 XXII, 6 *behā ḡathū uḡḡ-ḡōšū* 'they trusted in thee, and were not put to shame'  
 XXVIII, 7 *bḡ ḡātāh libbi* 'my heart hath trusted in him'  
 XXXI, 2 *ḡsiḡqāpchā falltēni* 'deliver me in thy righteousness'  
 XXXI, 15 *'ālḡchā ḡātāhtī iḡhōuā* 'I trusted in thee, O Jehovah'  
 XXXIII, 21 *kī ḡšēm qādšḡ ḡātāhnū* 'because we have trusted in his holy name'  
 XXXV, 13 *uḡfillāḡi 'al-hēqḡ ḡāsūb* 'my prayer returned into my own bosom'  
 XXXVIII, 2 *uḡbahāmāpchā ḡiassrēni* 'chasten me (not) in thy hot displeasure'

§ 26. The mutual position of subject and predicate in *nominal* sentences is also variable, the order *subject + nominal predicate* being inherited:

- S + P: XX, 8 *'ēlle ḡārēchēb u'ēlle ḡassūsīm* 'some (trust) in charlots, and some in horses'  
 XXII, 7 *u'ānochē ḡōlā'aḡ uḡḡ-'iš* 'but I am a worm, and no man'  
 XXXIX, 6 *uḡḡlādi ch'ājin neḡdḡchā* 'and my life-time is as nothing before thee'  
 P + S: III, 9 *laiḡhōuā haišū'ā 'al-'ammchā ḡirchāḡḡchā sḡlā* 'salvation belongeth unto Jehovah: thy blessing (be) upon thy people'  
 XXXIII, 1 *laišārīm nā'uā ḡhillā* 'praise is comely for the upright'  
 XXXVIII, 10 *'ādōnāi neḡdchā chāl-ta'auāḡi* 'Lord, all my desire is before thee'.



§ 27. Such facts prove the metrical extension of the external sandhi of colloquial language. Its function was to confer the status of thesis (= lack of metrical accent) to syllables which normally carried at least a weakened (secondary) stress. The metrical treatment of autonomous words is thus comparable to that of O. Germanic. But the important difference between these two written traditions is the careful marking of secondary accents (and of lenition) in Heb. The Heb. rendering of the text is a combination of phonic and metric transcription. From the metrical point of view the marking of secondary accents is irrelevant and the lenition of initial stops is predictable. A hemistich like

XXXIII, 21 *kî bšēm qāḏšō bāṭāḥnū*  
is *metrically*: *kî bšēm qāḏšō bāṭāḥnū*

though its correct reading would respect the secondary accents just as correct pronunciation takes into account combinatory variants (allophones). But the *metrical* equivalence of secondary stress with lack of stress is borne out by the equivalence of a single accented word with an accented word-complex, cf. numerous examples in the passages quoted above (§§ 18—20).

§ 28. The metrical transformation of a spoken text consists in Heb. in the replacement of the gradual differences of word-stress by a simple opposition between *accent* and *lack of accent*, i.e. in the polarization between strong and weak syntactical accents, sanctioned by *metrical* sandhi.

From the typological point of view Heb. metrics occupies a place intermediate between the rhythm of colloquial language and that of e.g. quantitative metre where word-accent is totally deprived of metrical function.

§ 29. Let us finally state the difference between our point of view and Sievers' conception of the Heb. metre (in *Metrische Studien* I, 1901, p. 404 ff. and 501 ff.).

The difference between the metrical pattern of the verse and its realization may be *paralleled* (not identified) with that between the phonemic and the phonetic transcription of a text. Whereas the metrical pattern is constant, its realization may be manifold being in our case conditioned chiefly by the collocation of word-accents. Sievers envisages only realization without trying to reach the underlying pattern. This is in agreement with the absence of functional approach to phonetic and metrical texts, predominant in the beginning of the century. But even if he was right in neglecting the great number of diacritic marks of the text referring to differences of stress and/or pitch, he missed the fundamental opposition between the *primary* and the *secondary* accents (*domini : servi*),

borne out by the metrical sandhi and furnishing the key to the metrical structure. It will be sufficient to cite one example. Cf. the 1. verset of the 1. psalm:

I Heb. text (distinction between *accentus domini* and *servi*) representing the realization of the metrical pattern:

'ašrē hā'îš 'ašer lō' hălāch ba'ašāp ršā'im  
ubdēreḥ hattā'im lō' 'āmūd ubmōšāb lešim lō' iāšāb

II Sievers' interpretation:

'ašrē hā'îš | 'ašer lō' hălāch | ba'ašāp ršā'im (1 + 2 + 2)  
ubdēreḥ hattā'im lō' 'āmūd || ubmōšāb lešim lō' iāšāb (3 + 3)

III Underlying metrical pattern as proposed above:

'ašrē hā'îš | 'ašer lō' hălāch | ba'ašāp ršā'im (1 + 1 + 1)  
ubdēreḥ hattā'im lō' 'āmūd || ubmōšāb lešim lō' iāšāb (2 + 2)

§ 30. Sievers' principal tenet „no accented syllable (of the colloquial language) can function as a metrical thesis“ has been replaced by „an arsis is always represented by an accented syllable (of the colloquial language)“. The latter formulation does not exclude the existence of metrical theses represented by syllables which in the colloquial language carry a secondary or even primary accent.

Sievers was right in excluding certain factors like „parallelism of members“ and other stylistic factors from the domain of Heb. metrics. The rather common confusion between the *metrical*, i.e. phonic aspect, and the *poetic* aspect referring to contents, is comprehensible since the two often go together. But there is no *intrinsic* bond between them, poetic prose on the one hand, legal or grammatical texts in verse-form on the other, being also admissible. Parallelism of members etc. are adornments proper to poetic style, but must be left out of consideration in the analysis of the metre.

§ 31. Another objection must be raised against the more recent tentatives of adapting the traditional Heb. text to a preconceived metrical pattern, viz. an *alternating* rhythm (x)xxx(x)... Cf. S. Segert *Vorarbeiten zur hebräischen Metrik* (I), Archiv Orientální 21 (1953) p. 481 ff. Such a metre, suggested by later Aramaic and Syriac poetry, could be of course the result of internal evolution of the traditional Heb. metre as described above. But in order to establish its existence already in the O. Testament the text handed down by the Massoretes must be respected. Arbitrary assumption concerning vocalic syncope, the syllabic value of *šva mobile*, *pataḥ furtivum* or anaptyctic vowels, shifts of natural word-accent, etc., must be avoided. There is an internal contradiction between the necessarily late origin of the hypothetical alternating metre and the occasional resorting to vowels whose syncope has taken place in the preliterate

period. Stress (*accentus dominus*) on particles, prepositions, conjunctions, even pronouns or construct state, is unusual, being borne out by the text only in exceptional cases.

Samples of alternating rhythm need not of course be excluded *a priori*. But they must be in agreement at least with the distinction between *accentus domini* and *accentus servi* of the text.

§ 32. The so-called „Babylonian Theodicy“ („Kohelet“), cf. B. Landsberger ZA 43, p. 32 ff., seems to furnish a reliable starting-point for the investigation of the *Akkadian* metre. The metrical character of this text is vouchsafed by its strophic arrangement: each of the 27 stanzas counts 11 lines beginning with the same syllable. In spite of the partial obliteration or even total lack of about one half of the text there is moreover no doubt about the poem being an acrostic, the 27 syllabic signs (though some of them hypothetic) forming the sentence „I, Šaggil-kīnam-ubbib, the conjurer, am a worshipper of God and King“. The importance of the text lies just in the acrostic arrangement permitting a neat delimitation of the verse-lines. The approximate date of the poem cannot be ascertained, but v. Soden (ZDMG, N. F. 14, 166, n. 1), relying upon linguistic criteria and the highly artificial form, seems to be right in considering it not earlier than the VIII<sup>th</sup> ct. If so, a comparison of its metre with that of the O. Testament would be based on two texts of the first millennium B. C.

§ 33. The two metres are similar to each other, the most common pattern being in each case a verse with four metrical stresses and the possibility of a caesura (2 + 2). The chief differences consist in:

1) the trochaic-daetylic rhythm of Akk. versus the iambic-anapaestic rhythm of Heb., a difference conditioned by the respective rules of word-accent<sup>5</sup>;

2) the treatment of accented word-syllables which in Akk. *always* function as metrical lifts whereas in Heb. they may lose their status in the metre to appear as *accentus servi*, i.e. as *metrical theses*.

§ 34. Heb. metres represents a more advanced stage of metrical art inasmuch as the integration of word-groups under a single stress (or rather a primary stress plus secondary stresses), proper to the natural rhythm of colloquial language, is imitated in the metre, hence the swelling of the syllabic volume of the verse-line. For examples cf. above § 18 ff. In Akk., on the other hand, the metrical theses are represented only by the unstressed word-syllables, by clitics (chiefly proclitics) and, last not least, by the *construct state*. We may safely assume that also in the last case the metre is in agreement with colloquial language.

<sup>5</sup> For Akk. accentuation cf. GAG § 38 f.

The difference between the two metres is therefore one of degree, the Heb. metre being partly emancipated from the natural rhythm of colloquial language, the Akk. one (almost) identical with it. One may compare the evolution of the alliterating line (2 + 2 metrical stresses) in the several Germanic languages: the scanty verse-line of the Edda; the more voluminous one of the O. Engl. *Béowulf*; the frequent swelling of the verse of the O. Sax. *Héliand*, which impairs its metrical character (this was probably the chief cause of the decline and final disappearance of the O. Germanic metre during the medieval period).

§ 35. Examples of verse-structure in the „Babylonian Theodicy“ (with Landsberger's translation) <sup>6</sup>.

## I

The verse contains *only four full-accented words*:

5. *āna aḥuka imsū malaka* 'where is thy brother (who) would be thy equal'
6. *āiš mudū iššanin išteka* 'where (is) the sage (who) would be a match for thee'
9. *aḥurakuma zarū šimtum ubtil* 'I was the last one, fate snatched away my parent'
10. *agarinnu alitti ittar kurnugi* 'Orcus killed the mother who had born me'
13. *naram libbuka tušakpidu limuttum* 'thou letst thy dear heart harbour evil'
15. *namratum zimuka nekuliš tušēma* 'thy radiant features thou letst (them) become darkness'
18. *naṭlatama niši miḥariš apātum* 'thou lookst upon men, all of them, the mortals'
25. *kuari luššiška limad amati* 'I will sound thee searchingly, learn my request'
54. *aklamā nindabā iliš usappi* 'have I ever denied an offering? (No,) I prayed to God'
68. *illu nussuqu milikka ellu* 'thy candid advice is noble and exquisite'
69. *ilten zikra muttaka luttir* '(but) let me — face to face — add a single word'
76. *ilannu kuššudu pananni lilli* 'at the top a cripple, in the front a lout'
137. *birta lullik nisāti luḥuz* 'I will move on the road, seek remoteness'
138. *bēra luḫti agā lumaššir* 'I will open the spring, let the wave take its course'
139. *bēra kidi šarraqiš lurtappud* 'I will roam like a thief about the wide field'

<sup>6</sup> The errors of the original, concerning chiefly vocalic quantity, have not been corrected.

140. *bitbitiš luterruba luni* 'bubuti' 'from house to house I will enter to avert my hunger'
141. *biriš lutte'lume sulê lušâd* 'I will lie on the lawn, run the highways'
212. *ripitta nakla šurrağa tušarša* 'thou letst palsy gain possession of thy clever heart'
218. *riši naššima bâši şabûşu* 'his head is lifted, what he wishes is there'
236. *šammê puridişu zamar iğalliq* '... are its legs, it is soon lost'
248. *ilişma duppussû parâ ireddi* '(meanwhile) the younger (brother) enjoys driving the mule'
254. *lî'u palkû şu taşimti* 'thou clever, sensible, possessed of discernment'
255. *litnumma şurrağa ila tadâş* 'thy heart is obdurate, so thou art vexing God'
260. *littu burşu reştû şapilma* 'the first calf of a cow is inferior'
261. *ligimuşa arkû maşi şittinşu* 'her second offspring is twice as big'
262. *lillu maru panâ iallad* 'a dull son is (the) first (to be) born'
265. *utagqamma ebri limad şipkiya* 'pay attention, my friend, and learn the flow of my speech'
278. *şarratu patiqtaşina şuetum Mama* 'the queen who has formed them, the princess Mama'
282. *şarmami meşrû illaku idâşu* 'he is a king, the genii of fortune walk by his side'
283. *şarrağış ulammanu dunnamâ amelû* 'they treat a wretched man as if he were a thief'
284. *sarkuş nullatum ikappuduşu nirti* 'they bestow on him calumny, devise evil suspicion against him'
287. *rimenâtu ebri nissatum şitemme* 'thou art merciful, my friend, (so) listen to my speech'
289. *rêşu palkû mutnennû anâku* 'I am a slave, a sensible, humble one'

## II

§ 36. Besides four full-accented words there are proclitics (united here with the following word by \_): prepositions, negation (*lâ, ul*), *şa, u, kîma*:

7. *ana\_manni lupridma nissatu lûtameşu* 'to whom shall I flee to let him know my despair'
11. *abi u\_banti izibuinnima bal\_tarûa* 'my father and my mother left me behind, so (I was) without my keepers'
12. *nâdu ebri şa\_tagbû idirtum* 'my pious friend who madest the mourning-speech'
14. *na'du tenka tumaşşil la\_le'îş* 'thy active mind thou madest (it) equal to an injudicious (one)'

26. *qulamma ana\_surri šimi qabá* 'pay attention for a moment and listen to my speech'
53. *aqrá šariri iḫṭa ana\_Mami* 'costly electrum he has weighed for Mami'
71. *iltapni itenšu muštemiqu ša\_ilti* 'those who piously worship the Goddess, become paupers and pine away'
74. *ilku ša\_la\_nemeli ašaṭ apšanu* 'a service without profit, I strain at the rope'
75. *iltakan ilu kî\_mašrê katuta* 'God gives (me) indigence instead of riches'
207. *kammi edluti ul\_upattá panišu* 'the secret tablets he did not reveal (them) to me'
237. *ša\_la\_illî gišḫappu raši makkura* 'the godless, the scoundrel who has amassed a fortune'
241. *šāra ṭāba ša\_illî šite'ema* 'the sweet fragrance of Gods seek (it) steadily, then'
242. *ša\_šatta tuḫalliqu tarab ana\_surri* 'what thou hast lost this year, thou shalt soon replace'
243. *ina\_adnāti abrēma šitnā idātu* 'I looked round among men (of this world), the signs were contradictory'
244. *ilu ana\_šarrabi ul\_pariš alakta* 'God does not bar the devil's way'
245. *išaddad ina\_mitrati zarú elippa* '(it is) the parent (who) tugs the canoe in the canals'
246. *ina\_qerib dunni rami bukuršu* '(while) his first-born lies on the couch'
249. *ina\_suqi zītulliš iṣād aplum* 'in the street like an idler rambles about the successor'
250. *išarrak terdinnu ana\_kati tiuta* '(while) the younger (son) bestows his livelihood on the indigent'
253. *ināšanni aḫurú šarú u\_šamḫu* 'the rich and voluptuous jeer at me (who am) the very last'
257. *léaussy šupšūqatma nišī la\_lamda* 'his wisdom difficult, incomprehensible to men'
259. *lillidu nissu kališ la\_murri* 'the litter of a premature animal is entirely meagre'
263. *li'um qarradu ša\_šani nibitsu* '„clever and brave“ is the second (son's) name'
268. *ušappalu dunnamá ša\_la\_ipušu ḫibilta* '(and) depreciate the poor one who has never done an injustice'
269. *ukannu ragga ša anzilašu kittu* 'they declare to be right the villain who loathes truth'
271. *umallū pašalla ša\_ḫabbilu niširta* 'they fill with refined gold the treasure-house of the evil-doer'
272. *uraggu iṣpikku ša\_pisnuqu ti'utta* 'they rifle provisions from the granary of the indigent'

273. *udannanu šaltu ša\_puḫuršu annu* 'they comfort the mighty one who is all sin'  
 274. *ulalu ibbatu idarrisu la\_lé'a* 'they ruin the weak, throw down the feeble'  
 279. *šarku ana\_ameluti itgura dababa* 'they made mankind a present of cunning speech'  
 280. *sarrāti u\_la\_kināti išrukūšu ina\_sattak* 'lie and untruthfulness they gave them for ever'  
 281. *šarḫiš ša\_šarī idabbubu dumqišu* 'flattering (the rich) they speak well of him'  
 286. *šarbabiš ušḫarammamūšu uballūšu kima\_lāmi* 'they let him perish like..., they quench him like a flame'  
 288. *rišamma namrašu amur lā\_tīdu* 'help me and look at my torment; know (that...)'  
 290. *riša u\_tuklatum zamar ul\_amur* 'help and encouragement I have never experienced'  
 292. *rigmu ul\_iššapu iššapil atmā'a* 'my voice was never loud, my speech remained lowered'  
 293. *rišīa ul\_ullu qaggari anaṭṭal* 'I did not raise my head, I looked upon the ground'  
 295. *riša liškunu Ninirta ša\_iddanni* 'let the God who has cast me out, render me assistance'

## III

§ 37. The group *construct state plus noun* forms a stress-unit with a single accent.

16. *naḏnuma appunu illaku uruḫ\_māte* '(men) are given up: for a certainty they go the way of death'  
 17. *nāri\_ḫubur tebbiri qabū ultu\_ulla* '„thou shalt cross the river of the nether world“ they have been told since eternity'  
 20. *namrā belu\_mešrē udammiqšu mannu* 'upon the well-fed, the owner of fortune, who has ever bestowed a kindness?'  
 21. *naṭil pan\_ilmma raši lamassa* 'only he who beholds *God's* countenance has a guardian angel'  
 22. *nakdi paliḫ\_īštari ukammar tuḫda* 'he who fears the Goddess, amasses abundance'  
 24. *kuzba gipiš\_tamtim ša ilakā miditka* 'is thy wisdom an overwhelming tide, flowing on?'  
 42. *šamaš bēl\_mišari kakdā sullimma* 'Šamaš, the god of justice, propitiate (him) constantly'  
 49. *akkatmuti HU-ki\_ili uzunšu ibši* 'was his ear turned to God's secret decrees?'

50. *aggu labu ša itakkalu dumuq-širi* 'the fierce lion who uses to devour the choice of the meat'
51. *akkimilti ilti šupuri ubil maṣṣatsu* 'to allay the displeasure of the Goddess did he bring an offering of flour?'
52. *akkitti bēl-pan ša-uṣṣubušu naḥašu* '(has) really the upstart whose wealth has increased...'
56. *gišimmaru iṣ-mašrē aḫi agru* 'palm-wood, the wood of wealth, my dear brother'
58. *ginatama ammataš nisi milik-ilim* 'thou art as firmly established as earth, (but) the decree of God is inscrutable'
60. *giš-qarbatim irḫiṣu itaršu mulmullu* '(the wild ass) who trod under foot the produce of the fields, the arrow will turn against him'
62. *gillat-nēšu ipušu petassu ḥaštum* 'for the misdeed which the lion committed a pitfall is open to him'
63. *gis-mašrē bēl-pani ša-gurrunu makkuru* 'he who is endowed with riches, the upstart who has hoarded wealth'
64. *giriš ina-ūm-la-šimati iqammešu malku* 'in the fire, before the day (of death) assigned (to him), the king will burn him'
65. *girri-annutū ikušu alaka taḫših* 'hast thou desired to go the way they have walked?'
66. *gimil-dumqi ša-ili darā šite'e* 'seek God's beneficial grace continually'
67. *iltānu tenga manit-niši tābtu* 'north-wind is thy decree, a fine current for mankind'
73. *illaban-appi u temiḫi eše' ištarti* 'in submissiveness and devotion I sought my Goddess'
78. *kina raš-uzni ša-tuštaddinu la-murqa* 'it is (on the contrary) true, clever one, that thou hast entertained unclean thoughts'
79. *kitta taduma uṣurti-ili tanaṣu* 'thou has cast away truth and mocked divine order'
80. *kidudē-ili ana-la-šusṣuru taḫšihu kabattuk* 'in thy heart thou wantedst to disregard the holy rites of God'
83. *qibit-pī-ili ilti ul-iššaddad ana-Jibbi* 'the utterance of God and Goddess is not intelligible'
135. *billudē-ili lumeš parši lukabbis* 'the holy rites of God I will despise, I will trample upon the rules of the cult'
219. *ridima us-ili uṣur masišun* 'follow the guidance of Gods and comply with their rites'
239. *ša-la-tuba'u tem-ili minū kuširka* 'thou who dost not seek God's order, what is thy success?'
247. *ilakkid labbiš rabi-aḫi uruḫšu* 'like a lion struts the eldest brother on his way'



251. *ina mahar qadmi ša addamusu minā uattar* 'I who must submit myself to the foreman, what can I gain besides?'
258. *lipit qāti Aruru miḥhariš napišti* 'made by the hand of Aruru, the living creatures all together'
267. *ušašqū amat kabti ša litmuda šagaša* 'they raise unto heaven the word of the mighty who is skilled in murder'
270. *uṭaradu kīna ša ana tem ili puqqu* 'they drive away the honest man who scrupulously (observes) God's commandment'
275. *u iāši itnušu bēl pani ridanni* 'the upstart is also at my heels, (while I am) pining away'
276. *šar qadmi Narru banū apāti* 'the king of the primeval age, Nurru, the creator of mortals'

§ 38. A division into two equal hemistichs (2 + 2) is indicated in a preponderant majority of cases. The following are the lines where *syntactical* enjambement prevents such a dichotomy:

9. *aḥurakuma | zarū šimtum ubtil*
16. *nadnuma | appunu illaku uruḥ mātē*
24. *kuzba gipiš tamtim ša ilakū | miditka*
212. *ripitta | nakla šurraḳa tušarša*
240. *šadiḍ nir ili | lū baḥi sadir akalšu*
241. *šāra tāba ša ilī | šite'ema*
260. *littu buršu reštū | šapilma*
282. *šarmami | mešrū illaku idāšu*
288. *rišamma namraṣu amur | lū tidū*
289. *rēšu palkū mutnennū anāku*

§ 39. There is a relatively small number of lines with *three* metrical stresses (about 11.5%).

8. *agamirma iširu lumnu libbi* 'when I was perfect (mature?) came straightway soreness of heart'
57. *gimil nagab nemēqi illuk liqti* 'favoured with the sum of wisdom, with jewellery of pure gold'
70. *illaku uruḥ dumqi la mušte u ilima* 'those who do not seek God go the way of luck'
72. *illigimiāma tem ili ašhur* 'already in the earliest germ I sought after God's will'
77. *iltaqū ḥarḥarūana attašpil* 'they take away my chains of honour and I am abased'
82. *kī qerib šamē meki ilī nesima* 'impenetrable like the interior of heaven is the scheming of the Gods'
235. *ša ḥarḥari ša taḥšihu bumašu* 'the chain of honour whose beauty thou hast striven after'
238. *šagašu kakkasu ireddišu* 'the murderer's weapon pursues him'

252. *ina\_šapal\_ašbaltīja kitmusaku anāku* '(nay) before my muleteer I must bow down'  
 254. *li'u palkū šu\_tasīmti* 'thou clever, sensible, possessed of discernment'  
 256. *libbi\_ili kima\_gerib\_šamē nesima* 'the heart of God is impenetrable like the interior of heaven'  
 266. *ušur nussuqa sekar\_atmīa* 'retain the choice maxim of my speech'  
 277. *šarhu Zulummar karišu\_tittišin* 'the renowned Zulummar who knipped off their clay'  
 291. *ribit\_aliia uba'u nihiš* 'across the square of my town I went at an easy pace'  
 294. *rišiš ul\_adallal ina\_puḥur\_itbariia* 'like a slave I was not praised in the assembly of my companions'

§ 40. E. Sievers' contribution to O. Babylonian metrics (ZA 38, p. 1 ff.), praised by H. Zimmern (*l. c.* p. 37 f.), is partly only of historical interest because of the *subjective* criterion of his well-known „Schallanalyse“. Moreover his intricate reconstruction of the metre again refers to the prosodic surface-structure, not to the underlying metrical pattern. Nevertheless, once *simplified*, his transcription mostly agrees with the rules proposed above. To take an example cf. his metrical transcription of the first three stanzas of the Ištar hymn (translated in A. Falkenstein's and W. v. Soden's *Sumerische und akkadische Hymnen u. Gebete* p. 235):

- I. *Il̄tam zum'rā, | rašūbti il̄tim*, 'praise in song a Goddess, particularly awe-inspiring among the Goddesses'  
*littā'id bēlet-nīši | rabī<i>t Igīgi*: 'let be celebrated the mistress of men, the greatest among the Igigu!'  
 v. 3—4 = v. 1—2 with replacement of *Il̄tam* by *Iš̄tar*  
 II. *Šā̄<a>t mēlišim | rù'amam lab'šat* 'she, with turgescient form (and) fascination endowed'  
*za'nat in'bi, | mik'iam u kuz'bam*: 'has fertility in abundance, seducing charm and voluptuousness'  
 v. 3—4 = v. 1—2 with replacement of *Šā̄<a>t* by *Iš̄tar*  
 III. *Šap̄tēn duš'šupat, | bal'ā-tum piša*, 'sweet as honey are her lips, her mouth is life'  
*sim̄ti'ššā | iḥannīma šehātum*: 'with her appearance laughter is fulfilled'  
*Šar̄ḥat ir'imu | ram'ūr rē'šu'šša*, 'she is splendid, ... are laid on her head'  
*ban̄ia šim̄tā'šša | bit'rām(a) ināša* 'her colours are beautiful, her eyes are many-coloured and iridescent'

§ 41. The underlying metrical pattern is much more simple, as rightly reconstructed by v. Soden (*op. cit.* p. 41):

- I. *iltam zúmrā | rašúbt' ilátim*  
*littá'id bēlet-níši | rabít Igígi*
- II. *šá<a>t mélišim | ru'amam lābšat*  
*zá'nat inbi | mīkiam u-kūzbam*
- III. *šáptēn dúššupāt | balátum piša*  
*simtíšša | iḥanníma šēḥátum*  
*šárḥat irimu | rámu rešúšša*  
*bánia šimtáša | bitrá(m)a ináša*

Notice that III, 2 has only three lifts, and the same holds true of I, 2 if *rabít Igígi* is to be taken as construct state.

Metrical lengthenings, decomposition of long vowels, shift of accent and double accentuation of words („schwebende Betonung“), intonations etc. postulated by Sievers are, however, only hypothetical requirements of his theory if they cannot be borne out by objective arguments.

From the linguistic point of view a dissyllabic value of certain long vowels, endorsed by writing, is of course possible, but scarcely relevant since the Akk. metre is not based upon isosyllabism. Metrical lengthenings are much more hypothetical, but again the metre not being quantitative long and short syllables may appear under the ictus and in the thesis. Intonations (rising, falling, rising-falling, falling-rising) are bound up with *performance* (recital) without being inherent features of the metrical system itself. The only pertinent problem is the word-stress. Is the double accentuation of forms like *pálhūšíma* 'are especially afraid of her' (v. Soden l. c.) acceptable? At first blush one would expect a similar treatment in the case of the construct state where, however, v. Soden and Sievers agree in transcribing *bēlet níši* or *bēlet-níši*. There is a difference: the form *bēlet* of the construct state is proclitic whereas *palhū* in *palhūšíma* has a virtual stress, its mechanical shift being due to the attached enclitics *ši* and *ma* (*pálhū* > *palhūši* > *palhūšíma*) and the overall rule of Akk. accentuation. Cf. Greek ἄνθρωπος τις, μᾶμός τις (ἄνθρωπος > \*ἄνθρωπος τις > ἄνθρωπος τις etc.). Divergently from Heb. such secondary accents may have functioned as metrical lifts. This is another indication of the more developed and relatively late form of the Heb. metres inclined to integrate not only secondary but even primary accents under a single metrical stress.

§ 42. Taking into account these facts one cannot easily accept the hypothesis of F. M. Th. De Liagre Böhl advanced in his short article *La métrique de l'épopée babylonienne* (Cahiers Thureau-Dangin I, p. 145—152) concerning the metre of the *epical* poetry of Babylonian. He assumes the existence of an *alternating rhythm* consisting in a regular succession of stressed and unstressed syllables. According to him a purely „verbal

rhythm“ — like in Heb. or O. Germanic — would be „disappointing (*décevant*)“, p. 151<sup>a</sup>. In order to prove the existence of an alternating rhythm he postulates, in the first place, the elision of final short vowels not followed by mination, i.e. of -*ū*, -*ī*, -*ā* of case-forms, of determinative and relative pronouns, of prepositions, of preative and affirmative particles, of -*ma*, *lā* etc.; of the initial vowel of *ul*. Even the verbal ending -*ū* is sometimes subject to „abbreviation“ i.e. to elision (p. 151).

The short forms of the construct case are also liable to lose their accent before the genitive.

Whereas the latter postulate is justified, the supposition of a general elision is surely arbitrary, the more so as according to the author (p. 146) the elision in question seems to have taken place earlier in poetry than in the prose (i.e. in colloquial language). But numerous parallels taken from different languages prove that normally poetry, safeguarded by the metre, is apt to preserve the older forms.

§ 43. Still more disputable is the assumption that the alleged syncope entailed a shift of accent (p. 151). This again would be unparalleled. On the contrary, such an elision would engender a new prosodic category, viz. *oxytones*, up to then represented only by well-defined word-types (GAG, § 38 g.) Verses like

*Enum<sup>a</sup> eliš | lā nābū šāmām<sup>a</sup>*  
 or *lūptika Gilgameš | amāt niširti<sup>a</sup>*  
 (instead of *Enūma eliš | lā nabū šamāmu*  
 or *luptēka Gilgameš | amāt niširti*)

represent a serious deformation of the colloquial language to suit a preconceived idea of the epic metre. If there existed an essential difference between lyric and epic poems it would be represented by the structure of the stanza, the length of lines or the number of lifts, but not by the *materies metrica* itself, i.e. the phonic form and the accentuation of words.

§ 44. This means that also in the case of *Enum eliš* and of *Gilgameš* one will expect the same rules concerning phonetic form and accentuation of words as in the examples treated above. As a matter of fact we find in a great majority of cases the same verse-lines of four or three metrical lifts, although the delimitation of the lines may not always be as easy as in the Theodicy (putting aside the possibility of interrelations mentioned by De Liagre Böhl, p. 148 § 2). Cf. *Gilgameš* XI, 9 ff.:

9. *luptēka Gilgameš | amāt niširti*
10. *u-pirista ša-ilāni | kāša luqbika*
11. *Šurippak ālu | ša-tidūšu ātta*
12. *ina-kišad-nāru | Purātti sāknu*
13. *ālu šū-labirma | ilāni qirbušu*

The above rhythm is not more „disappointing“ than that of the O.Germanic epic poetry.

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§ 45. The three metrical systems described here represent three distinct types differing by the *degree of accentual integration* of the members of the verse.

In Akk. the distribution of metrical stress closely follows that of the normal stress of colloquial speech.

In Heb. there is already a tendency to incorporate more than one fully accented word under one ictus (= in a single metrical bar), cf. also the introduction of word-internal sandhi within the bar.

In Arabic the whole verse may be called a single stress-unit since stress has ceased to be a rhythmic factor. There is no parsing of the verse-line by metrical *stresses*. The suppression of individual word-accents has been sanctioned by the introduction of metrical sandhi in the whole line. The old accented syllables being henceforth on a par with the old unaccented ones, a new, quantitative rhythm became possible.

## ADDENDA

Chap. III § 18 : The *t*- class, originally stative or intrans.-fientive, a source both of mediopassive verbs and of the Akk. perfect, would thus from the semantic point of view correspond to the I. E. derivatives in *-ē-* („to be in a state or to get into a state“). Cf. the verbs in *-ē-* of Italian, Celtic, Germanic, Baltic, Slavic, and the passive aorist in *-ē-* of Greek.

Chap. IV § 13 : The rise of the transitive type *qatala* must have been preceded by the use of the perfect *qatila* with intransitive active verbs with the present *iaqtīlulu*. When some intransitive verbs developed a secondary trans.-causative function, the relation

intrans. <i>iaqtīlu</i> ( <i>iaqtulu</i> )	intrans. <i>iaf'alu</i>
↓	↓
<i>qatila</i>	<i>fa'ila</i>

could engender the proportion  $iaqtīlu : qatila = iaf'alu : fa'ala$ , the latter form being originally used only in the secondary trans.-causative function. The difference of diathesis could then entail a corresponding distinction between *qatila* and the new form *qatala*.

Chap. VII §§ 18—20 : Judging by the above examples of a formal distinction between the collective and the individualizing use (*species : individual*), a distinction discarded or replaced by other formatives (cf. Ar. *-at*), one is tempted to look for an analogous original difference between Ar. *maliku* and *maliku<sup>n</sup>*. The introduction of the article *al-*, definite and at the same time individualizing, restricted *-u<sup>n</sup>* to the indefinite individualizing function : *maliku* → *maliku<sup>n</sup>* → *al-maliku*.

It is the subsequent disappearance of the semantic difference between the collective and the individual expressions that is responsible for the historical distinction between the definite and the zero article *-n* (including the indefinite function). Nunation (or mination) could therefore have been originally an individualizing formative or a definite article. General linguistic considerations exclude the possibility of its having been an indefinite article as assumed by Broekelmann GVG I p. 472.

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